Marywood
U N I V E R S I T Y

Military Adolescents:
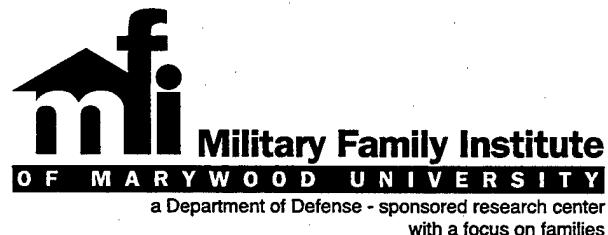# Their Strengths and Vulnerabilities

Dorothy J. Jeffreys, Jeffrey D. Leitzel
Gail Cabral, Joanne Gumpert, Elizabeth Hartley
Douglas Lare, Nancy M. Nagy, Edward J. O'Brien
Theresa J. Russo, Mary Salvaterra, Jane Strobino

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MILITARY FAMILY INSTITUTE
MARYWOOD UNIVERSITY, SCRANTON, PA

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a Department of Defense - sponsored research center
with a focus on families

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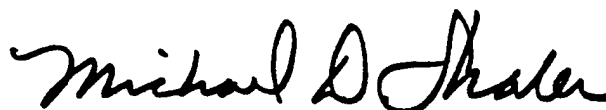**Deputy Director for Administration**

NOTICES

Foreword

This research project is a landmark effort in expanding the understanding of the military adolescent. The Department of Defense reports more than 350,000 adolescent youths between the ages of 11 and 17 years live in military families, yet surprisingly little is known about these young people, and even less is known about how they compare with their civilian counterparts. This lack of clear understanding was the genesis for this research project.

The results of this study show that the majority of military adolescents report being healthy, engaging in regular exercise, participating in appropriate school and community activities, and getting good grades in school. Additionally, they related that they were happy with their school, home, and community environments. Overall, military adolescents are doing at least as well and in some cases better than their civilian counterparts on most of the indicators measured. Military adolescents normally attend an average of five schools by the time they are 17, and they are called upon to make the constant adjustment from the familiar to the unfamiliar as their parents are restationed around the world.

There are a number of areas for concern for the military adolescent, and they are similar to the challenges facing adolescents everywhere. Alcohol and drug use, while reportedly lower than that of their civilian counterparts, puts a number of developing youngsters at risk. Socialization patterns with their peers and reports of indiscipline in schools are two of the areas which require further study. Our data confirm previous studies which reported that adolescents who participate in extracurricular activities are less likely to use drugs, alcohol, or tobacco. Thus, the extensive investment by the Department of Defense in youth activities programs; morale, welfare, and recreation endeavors; and school activities has a long term payoff in the health of our young people.

The phrase 'military brats' is a term of endearment for many military adolescents, and helps to symbolize the unique set of challenges and opportunities faced by children growing up in military families. The results of this research will help to further the understanding of these challenges and will assist policy makers in shaping future decisions which affect our military youth. As with any sound research project, there is developed in this report a clear outline for future research efforts to continue to improve our knowledge and understanding.

Michael D. Shaler
Director

Acknowledgements

About the Authors

Dorothy J. Jeffreys, Ph.D., is a Professor in the School of Social Work, Marywood University, Scranton, PA. She served as the Principal Investigator of the "Military Adolescents: Their Strengths & Vulnerabilities" study. Dr. Jeffreys is a licensed social worker in PA. She has also served as a co-investigator on the Women Aboard Ship Study conducted by the Naval Health Research Center, San Diego, CA. Dr. Jeffreys received her Ph.D. in Social Work and Developmental Psychology and her M.S.W. from the University of Michigan. She also holds an M.A. in Developmental Psychology and a B.A. in psychology from Oakland University.

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Joanne Gumpert, D.S.W., is Associate Professor at Marywood University School of Social Work. Gumpert has over thirty years teaching experience, developed and administered the first graduate program of social work in Vermont, and has received the Social Worker of the Year award, the Certificate of Appreciation from the Rural Social Work Caucus and a Governor's Proclamation from Vermont. Her areas of expertise are social work practice with groups and rural practice.

Elizabeth K. Hartley, D.S.W., is an Associate Professor in the School of Social Work at Marywood University. She received her doctoral degree from the University of Pennsylvania and her M.S.W. from the University of Denver. Her teaching and research interests include social policy, ethics, alcoholism, trauma, and minorities.

Douglas Lare, Ed.D., is an Assistant Professor in the Graduate Education Department at Marywood University, Scranton, PA. He received his Ed.D. from Lehigh University and his Ed.M. from Harvard University. Dr. Lare has been a teacher, school administrator, and central office administrator in a variety of public and private schools in Minnesota, New Jersey, Iowa and Pennsylvania. He remains involved in schools, focusing on educational reform and school/business relationships.

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Executive Summary

1. Introduction

This technical report describes the strengths and vulnerabilities of adolescents who live in a military family. The conceptual model (Figure 1) that guided this research was developed by an interdisciplinary team of researchers at Marywood University.

Figure 1 Conceptual Framework for Military Adolescent Project
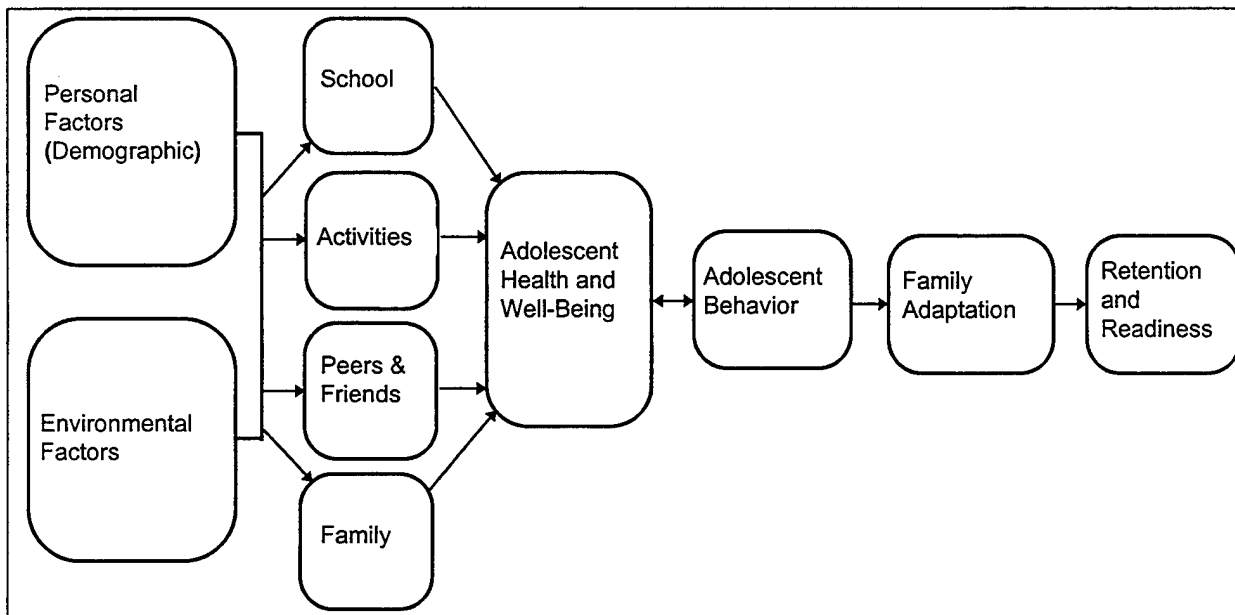
The following questions were advanced to investigate the physical health, mental health, activities, and behaviors of these youths.
1. What are the health status and well-being of adolescents aged 10 through 18 who reside in a military family?
2. To what extent do these adolescents engage in antisocial behaviors?
3. How many of these adolescents are using drugs and alcohol?
4. In what recreational and leisure time activities are these adolescents engaged?
5. What are the educational experiences and perceptions of school for these adolescents?
6. What experiences do these youths have with peers?
7. What is the quality of the relationship between these adolescents and their families?

8. What experiences have these adolescents had because they are part of a military family?

9. What are the perceptions of these adolescents concerning military family life?

The response items addressing the overall questions are summarized by both military factors and personal characteristics of the respondents. Whenever possible, comparative data from civilian populations are presented. The military factors consist of exposure to specific military environments: service of military parent (Army, Air Force, Marine Corps, & Navy); location of installation to which the military parent is assigned (CONUS [Continental United States] or OCONUS [Outside Continental United States]); and pay group of military parent (E1-E6, E7-E9, & Officer). The personal characteristics are gender (male or female); age group (10-12, 13-14, 15-18); and race (self identified as White or Black).[1] Frequency tables for questionnaire items addressed in this report can be found in Appendix A. (Appendixes published separately.)

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[1] Respondents were asked what race they consider themselves to be. The responses available were White; Black or African-American; Indian (Amer.)/Eskimo or Aleut.; Asian or Pacific Islander; and other. Insufficient numbers of respondents marked Indian et al., or Asian et al., to include them in the analyses. While a sufficient number of subjects identified themselves as other, it is believed that the group is diverse and may not have attributes in common. Therefore, the analyses of race differences only includes those participants who identified themselves to be either White or Black. For all other analyses all respondents were included.

2. Methodology

This project used a two-stage stratified probability sampling design. Independent random selection of installations within each service with probability proportional to size occurred in the first stage. In the second stage, adolescents were randomly selected to provide the target number in the sample while keeping overall probability of selection at the individual adolescent level as close to equal as possible. For OCONUS sites, all members of the population were asked to participate. Thus, sampling for OCONUS was essentially a single-stage, cluster design.

A comprehensive description of the methods utilized in this study can be found in Appendixes B, C, and D. Appendix B presents the sampling design. Appendix C covers the data collection procedures. Appendix D consists of the briefing packet that installation commanders and relevant personnel received during the initial project briefing at each installation. Appendix E contains a copy of the questionnaire used for data collection. Appendix F presents material of relevance to the data analysis (for example, how the weighting of the data was carried out and statistical tests used for the analyses).

3. Participants

A total of 6,382 adolescents aged 10-18 years old who live in a military family provided usable data on the questionnaire. For a complete description of the participants, see Tables 3-1 through 3-7 in section 3 of this report.

The overall response rate for this survey was 19.5%.[2] This low response rate raises the issue of biases which may be present in the data set. That is, that the respondents differ in some important way from the entire population of military adolescents. While the process of weighting the data can minimize the impact of such biases, it does not rule out the possibility that the data obtained may, in fact, not be representative of the entire population of military adolescents.

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[2] Response rates were also calculated separately by service for CONUS sites and by region for OCONUS (Japan and Europe). There was substantial variability across subgroup response rates. They ranged from a low of 7.1% for Navy CONUS to a high of 31.5% (pooled across services) for Japan. Interested readers are referred to section F2 of Appendix F for further detail.

The weighted sample data do closely resemble the population in terms of distribution across the service, location, and age variables.[3] There is no reason to suspect that the current sample was systematically biased in any substantial way that would have affected any of the indicators assessed. The data demonstrated fairly close correspondence with responses provided by comparable civilian samples.

4. Findings by Content Area

Throughout this section of the executive summary, percentages of youths engaging in various behaviors or endorsing different attitudes are often presented in general, descriptive terms, such as small, large, a majority, etc. Readers who are interested in the specific items and actual percentages for the variables being addressed may refer to the section in the body of this technical report for the corresponding content area.

4A. Health

- The majority of the adolescents surveyed reported their perception of overall health to be good or excellent.
- A very small percentage of youths reported serious health conditions.
- The self-reported health status of these military adolescents was very similar to reports from civilian samples (e.g., Newacheck. & Taylor, 1992; Udry et al., 1997).
- The majority of the participants stated that they engaged in regular exercise. Only a small percentage reported not exercising at all.
- A small percentage of respondents reported that they had used cigarettes or chewing tobacco in each of the following categories of use: occasionally, regularly in the past, or regularly now.
- This sample of military adolescents was less likely to smoke cigarettes than the sample surveyed by Johnston, O'Malley, & Bachman (1995).

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[3] Closer correspondence could have been obtained between the weighted data set and the population proportions. Obtaining this correspondence would have meant using weights with an extremely large range. The range of the weights was constrained so that the highest and lowest would not differ by more than a factor of ten.

4B. Mental Health

- The respondents' self-esteem (Rosenberg, 1965), depressed mood (Carey, Lubin, & Brewer, 1992), and trait anxiety scores (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) were comparable to adolescents who live in the civilian sector.
- The average optimism reported by these youths was high.
- A small percentage of adolescents, approximately 3.8% who completed all scales that made up the Index of Psychological Well-Being (IPW),[4] scored below 30 on the index. These are participants who scored two standard deviations below the mean and those scoring below this point represent the group that is most severely at risk for experiencing psychological difficulties.

4C. Antisocial Behavior & Alcohol and Drug Use

- The majority of respondents had not engaged in any of the mild/moderate antisocial behaviors (e.g., gambling, shoplifting, vandalism, or carrying a weapon). However, a sizable number reported having once bet money (19.6%); stolen something from school (14.6%), teacher, or student; and, had police contact (13.3%). The most frequent behaviors occurring more than once were bet money (22.1%), broken the law uncaught (17.0%), and shoplifted (14.7%).
- Most of the adolescents stated that they had not engaged in any serious antisocial behaviors. However, 10.5% said that they had hurt someone badly, 7.6% had been convicted of a crime, 3.6% had been given a ticket for something besides speeding, and 6.5% had been arrested.
- Only 29.2% of the respondents reported using alcohol or illegal drugs.
- For youths who reported using these substances, the drugs of choice were alcohol, marijuana, and inhalants.
- For those adolescents reporting using drugs in the last 30 days, 55.6% used alcohol, 20.2% used marijuana, and 9% used inhalants.
- Use of alcohol and drugs in the civilian population is significantly higher than what was reported by these respondents (Johnston, O'Malley, & Bachman (1995); Parents Resource Institute for Drug Education, 1996).

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[4] The IPW is a composite mental health index, composed of self-esteem, depressed mood (reverse coded), trait anxiety (reverse coded), and optimism. These scale scores were averaged and converted to t-scores.

4D. Recreational and Leisure Activities

- A higher percentage of the respondents reported using youth programs off base or post than used those available on installation.
- Adolescents most often reported attending these programs only for special events.
- Within the last year, participants were most often active in sports outside of school, church activities, band/chorus, and school athletics. A small percentage stated they did not participate in any of the activities listed on the survey.
- A large percentage of youths participated weekly in sport activities.
- The free time activities most often reported were hanging out with friends, watching TV, and doing homework.
- While a large percentage of respondents reported doing volunteer work or working at a job, only a small percentage stated that they often engaged in these activities.
- Where comparison data was available for civilian populations in terms of leisure-time activities, these military adolescents were found to be quite similar to the general population.

4E. Educational Experiences

- The number of schools attended ranged from one to ten or more; the average was 5.15, the median was 5.
- The overall grade point average of the respondents was 3.03 on a 0-4 point scale with 4 representing the highest GPA.
- A large percentage of adolescents reported positive interactions with teachers. A small percentage said that teachers put down students.
- The majority of participants agreed that there was a real school spirit, that rules for behavior were strict, and that discipline was fair.
- A large percentage stated that other students disrupt class, disrupt learning, and often get away with their misbehavior.
- Negative school behaviors most frequently reported by respondents were being late for school and breaking rules. Receiving warnings about grades and behavior, as well as being sent to the office for misbehavior, were the most frequently reported consequences.
- Skipping classes, suspensions (in school or out of school), as well as transfers due to misbehavior, were infrequently reported.
- The majority of youth reported feeling safe at school; however, some agreed (12.7%) or strongly agreed (5.9%) with the statement "I don't feel safe at this school."

- A large percentage of respondents indicated that their parents were actively involved in their education by checking homework, helping with homework, and rewarding good grades. However, three-fourths said that their parents limited privileges because of poor grades at some point in time.

4F. Relationship with Peers

- The majority of youths reported not dating or not currently dating; while a small percentage stated that they seriously dated.
- The majority of participants indicated being part of either a large group, a small group, or both. A small percentage related that they were not part of any group.
- A high percentage of respondents identified with friends.
- The majority of adolescents indicated having lots of friends, having someone to hang out with, and being liked by school kids. Most did not relate that they felt lonely or alone.

4G. Relationship with Family

- A family satisfaction mean of 3.42; family cohesion mean of 3.48; and family adaptability mean of 3.34 were recorded for this sample of military adolescents. These scores could range from 1-5, with higher scores indicating greater levels of family satisfaction. Respondents scores were comparable to youths in the civilian population.
- Family satisfaction was significantly related to family structure, adolescents living with one parent and one stepparent had the lowest family satisfaction followed by those from single parent families and two parent families.
- Slightly over one quarter reported parental use of physical punishment. Of those adolescents who reported parental use of physical punishment, 29.5% indicated it occurred only once, 46.3% said a couple of times, 16.0% stated several times, 4.1% related that it occurred fairly often, and 4.1% reported it occurred very often during the past year.
- Respondents reports of family satisfaction were related to whether or not their parent used physical punishment. Satisfaction was highest among those who were not physically punished. Among those who were physically punished, family satisfaction was inversely related to frequency of such punishment.

4H. Military Experiences and Perceptions

- Fewer youths reported living on base or post in military housing than living off base or post in non military housing. A very small percentage reported living in military housing off base or post.
- The majority of fathers had been deployed during the past year. However, only 11% of mothers were deployed.
- When parents were away, the most frequently reported duration was less than three months followed by three to six months and then more than six months.
- A small percentage of adolescents experienced residential displacement due to parental deployment. When this occurred, it was generally due to their father's deployment and the duration was often greater than one year.
- A large percentage of adolescents reported that they had lived overseas and many related that their last move was from overseas.
- The average number of moves reported by the respondents was five.
- While a large number of respondents perceived military family life as strict, the largest percentage of youths felt that military family life was neither strict nor relaxed.
- The majority of the youths reported feeling safe in their area of residence and were unconcerned about the possibility of moving to an area with more violence and higher crime.
- The majority of respondents reported being happy with where they live, being somewhat happy with the military way of life, and feeling that the military offered many opportunities for its members.

5. Summary

The preponderance of respondents to this survey reported being healthy; engaging in weekly exercise; participating in appropriate school and community activities; doing homework and getting good grades in school. Furthermore, they recounted being happy with their school, home, and community environments. Comparisons with other studies, where available, revealed that military adolescents are doing at least as well, and in some cases slightly better than their civilian peers on most of the indicators measured.

Only a few respondents were at serious risk for mental health problems. These numbers appeared to be comparable to those in the civilian population. A large percentage of the adolescents surveyed related that they did not use alcohol, illicit drugs, or cigarettes. When they did use these substances, their drugs of choice during the past 30 days were alcohol, marijuana, and

inhalants. These military adolescents reported substantially less alcohol and drug use than civilian youth. Furthermore, few respondents related that they engaged in antisocial behaviors.

A concern arising from this data is the adolescents' reports of discipline problems of other students. Many stated that their learning in school was disrupted because of behavior problems and that few consequences were given for this behavior. There were also a number of youths who related poor discipline patterns by their parent/s (e.g., the repeated use of physical punishment). Additionally, while the majority declared that they did not engage in delinquent behaviors, a small percentage of youth were engaging in antisocial behaviors of a serious nature. Identification of these youths would allow needed services to be provided for them.

A further issue of importance that surfaced was the socialization patterns of these youths. While most adolescents reported having friends, a small subgroup appeared to be having difficulties making new friends. Peer relationships can be problematic since these youths move and change schools often, thus enduring frequent exposure to disruption of their social networks.

The majority of the respondents reported that they felt safe at school and in their place of residence. However, the fact that some respondents felt unsafe is of particular concern since these feelings could lead to school and mental health problems (Jeffreys & Leitzel, 1997).

6. Summary of Group Differences

Many statistically significant differences were found by service, location, pay group, gender, age, and race group . These differences were found on health, antisocial behaviors, alcohol and drug use, recreational and leisure activities and environmental factors. Air Force youths reported fewer risk factors and Navy youths appeared to be most at risk. Adolescents living overseas were found to be more at risk than those living stateside. OCONUS youth seemed to have greater potential for obtaining support since they lived more often on base or post and participated in youth programs. The children of Officers presented themselves as less at risk than the other two pay groups, while children of parents in the E7-E9 pay group appeared to be at greatest risk.

6A. Service Differences

Air Force youths were least likely to have ever smoked cigarettes, used drugs or alcohol, or to report engaging in antisocial behaviors during the past year. Navy youths, on average scored lower than the other three services on the Index of Psychological Well-Being. Air Force youths generally viewed their interactions with their teachers more positively than youth with a parent in the other three services. More Army families than other service families reported living in military housing on and off base/post, living overseas, and moving often. Army fathers were more often separated from their children than were those from other groups. Air Force adolescents had the most positive perception of opportunities the military offers its members.

6B. Location Differences

Youths living overseas reported more moves, more safety in their place of residence, and greater concerns about moving to an installation with more violence and higher crime than those adolescents living stateside. OCONUS adolescents were also more likely to report that they had engaged in antisocial behaviors. On the other hand, those youths living stateside reported happiness with where they lived and with the military family life more often than those living overseas. CONUS adolescents perceived their interactions with their teachers more positively than those living overseas. They also reported that the military offers its members opportunities. Youth living overseas reported more frequent separations from both their mothers and their fathers.

6C. Pay Group Differences

Officers' children more often than youths with parents in the other pay groups reported moving often, feeling safe in their neighborhoods, feeling happy with where they lived and military life, and feeling that the military offers its members opportunities.

6D. Gender Differences

Fewer females than males reported their health as excellent and females were also less likely than males to participate in weekly exercise and physical activities. On the other hand, females were more involved in academic

endeavors than males were and reported fewer problems with school and fewer behavior problems. More males than females reported engaging in sports and antisocial behaviors. Of concern is the involvement with alcohol, illegal drugs, and cigarettes for both males and females. While there were no differences by gender in alcohol use, males were more likely to have used marijuana or inhalants at some point during their lives. Furthermore, females were having an easier time socializing with friends than males, but males reported greater family satisfaction than females. More females than males reported that they felt that military family life was strict and that they worry about moving to an installation with more violence and higher crime.

6E. Age Group Differences

More of the younger than older adolescents reported good to excellent health, engaging in activities (including activities at the youth centers on base or post), doing better at school, interacting with teachers, identifying with friends, and having better perceptions of their family and military life. The youngest age group reported substantially higher levels of both psychological well-being and family satisfaction than either of the older age groups. More of the older two groups of participants reported engaging in sports programs and antisocial behaviors. Like the civilian population, as military youths aged they perceived themselves as having less support and thus, were more at risk. Furthermore, it is problematic that as youths aged they were more likely to report feeling alone and lonely. Older youths more often than younger adolescents view the military family life as strict, reported being unhappy with their place of residence, and reported that they were less happy with military family life. However, this older group was more likely than other groups to report that the military provided its members with opportunities.

6F. Race Group Differences

Black youths reported that they engaged in antisocial behaviors, had frequent problems in school, and felt alone and lonely more often than White teens. On the other hand, a higher percentage of Whites than Blacks reported smoking cigarettes. Black youths more often lived on base or post in military housing and they were more likely to report using the youth centers on base or post. White youths were more likely than Black youths to report belonging to organizations, having a positive attitude toward school, identifying with their friends, experiencing satisfaction with family life, feeling satisfied with their place of residence, and perceiving the opportunities the military provides its

members positively. Black adolescents were also more likely to report having experienced a separation from their mother due to her military assignment.

7. Implications

7A. Health Status

The rates of health problems in this military sample are close enough to those presented in the civilian literature to indicate that there are not substantial differences in the health status of military adolescents as compared to civilian youths. Thus recommendations from the literature with respect to improving adolescent health should be applied.

- Education and counseling programs for youths and their parents should promote a healthy lifestyle. These programs should include instruction on environmental factors affecting health, nutrition and exercise information.
- Anti-smoking education programs (shown to delay the onset of use) should be implemented or expanded.

7B. Mental Health Status and Well-Being

Social belongingness and family satisfaction accounted for a substantial proportion of the variance in well-being scores (Leitzel, Jeffreys, VanBelle, & O'Brien, 1997). This indicates that given the frequent moves that are encountered by military adolescents, well-being may be buttressed by assisting youths in quickly developing a sense of belonging with their peers.

- Programs should be developed to identify and ensure appropriate treatment for those youth who are most clearly at risk.
- Family friendly relocation processes could have a positive impact in terms of both increased family satisfaction and greater levels of social belongingness.
- Mentoring programs should be developed with input and assistance from adolescents.

7C. Antisocial Behavior & Alcohol and Drug Use

The majority of respondents did not engage in antisocial behaviors or use alcohol and drugs. Since any involvement in these behaviors is so problematic, the military should consider expanding programs to address this misconduct. It would be beneficial if these programs were implemented overseas as a higher percentage of youths living OCONUS reported alcohol use and engaging in antisocial behaviors.

- Expansion of prevention programs.
- Identification of adolescents at risk.
- Implement or expand intervention programs that have been successful in the military (e.g., Caulkins, Fitzgerald, Model, & Willis, 1994) and civilian populations.

7D. Recreation and Leisure Activities

Activities have been identified as a protective factor against negative outcomes during adolescence (Losel & Bliesener, 1994). Involvement in appropriate activities is associated with higher self-esteem and greater well-being (Jeffreys & Leitzel, 1997). While 90% of the respondents reported participation in either school or community activities, only 42% used military youth centers. As well, females and older youths participated in fewer activities than other adolescents. Therefore, efforts should be considered which would involve more youths, especially the most vulnerable populations, in activities on base/post, off base/post, and at school. These efforts might include but not be limited to the following:

- Increase awareness of activities that are available to military youths on and off base/post.
- Involve adolescents in the planning of activities to increase investment and thus, utilization.
- Activities on base or post should be coordinated and, where possible, integrated with school and community activities.
- Increase efforts to involve females and older adolescents in athletics and other programs.

7E. Educational Experiences

Respondents' GPAs were generally high, school culture was generally viewed as positive, and parents were reported to be involved in respondent's school work. However, the misbehaviors of other students were reported as disruptive and as an interference with learning. Involvement in school activities was associated with greater well-being and a positive school culture was associated with less antisocial behaviors (Jeffreys & Leitzel, 1997). Therefore, the military should investigate ways to encourage parents to become more involved with the school process in ways that will encourage adolescent involvement in school activities and foster a positive school culture.

- Military parents should collaborate as much as possible with school personnel in the development of policies and procedures addressing rules

and discipline. One example is parents assisting with the development of programs focused on handling misconduct in the classroom.

- Increasing adolescent awareness of the consequences of misbehavior in educational settings may have a significant payoff.
- Military personnel should be encouraged to participate in school activities, especially those programs (academic and non-academic) that foster student involvement.
- Military personnel should be made aware of servicewide policies, such as the Army's (Willis, 1997) allowing time off from duty for volunteering. Encouraging personnel to become more involved in schools and youth activities would accrue important benefits to all concerned.

7F. Relationship with Peers

The majority of respondents reported satisfying relationships with peers. A small percentage did not report belonging to a group of peers and thus, felt alone and lonely. Peer relationships were not associated with family, school, well-being, involvement in activities, or antisocial behaviors (Jeffreys & Leitzel, 1997).

- Military personnel might explore ways to help promote the development of friendships among youth.
- Peer mentors could be identified for adolescents when they move to a new base or post.
- In-depth investigations of the socialization processes of military adolescents should be included in future research.

7G. Relationship with Family

Most respondents reported generally high levels of family satisfaction and happiness with military family life. While family structure was significantly related to level of satisfaction, whether or not they lived in military housing was not related to level of family satisfaction. While a larger number of respondents perceived military family life as strict rather than relaxed, the largest percentage of youths felt that military family life was neither strict nor relaxed. Some respondents reported dissatisfaction with their family and military family life. According to the literature and current data, family satisfaction is often linked to higher levels of satisfaction with peers, school, and the community, and lower levels of delinquent behavior and alcohol and drug use (Eccles et al., 1993; Jeffreys & Leitzel, 1997). Those youths who reported being physically punished by their parents also reported lower family satisfaction. Therefore,

the military should consider implementing and expanding parenting classes and other programs to assist families with children.

- Parenting programs focusing on discipline patterns using the information from this study should be initiated. Such programs should focus on the connections among family satisfaction, strictness, punishment, well-being, and antisocial behaviors. These programs could also provide instruction in behavior modification techniques that could be utilized as an alternative to physical punishment.
- Parental involvement in school, sports, community, and youth activities should be encouraged.
- Families should be educated regarding the importance of friendships for their adolescents.
- In depth investigations of parenting patterns should be initiated.

7H. Perception of Safety

The majority of respondents reported feeling safe in their place of residence and in their schools, but those who reported feeling unsafe were also likely to have reported more indicators of gang activity and greater exposure to violence against both themselves and others (Jeffreys & Leitzel, 1997).

- Public relations work regarding safety, violence, and crime on installations needs to be done with incoming families.
- If safety is an actual issue at a given site, efforts should be made to educate families regarding safety and security features and programs already in place. Coordination with schools and communities in the vicinity of installations is essential if these efforts are to be successful.
- In depth investigations of safety and gang-related activities are needed.

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Military Adolescents: Their Strengths and Vulnerabilities

Contents

1. Introduction

Adolescence is the life stage during which an individual makes the transition from childhood to adulthood. As adolescents undergo this transition, they experience rapid physical changes, cognitive maturation, social role redefinitions, school transitions, and the emergence of sexuality. Adolescents must resolve questions of relationships with peers and family in order to create and consolidate elements of personal identity and psychosocial orientation (Newman & Newman, 1991). Attitudes toward self, values, and aspirations are integrated and influence academic achievement and future goals. The tasks involved in achieving responsible adulthood have been defined as (a) the search for self-definition and a personal set of values; (b) the acquisition of competencies and skills for social interaction with parents, peers, and others; (c) the achievement of emotional independence from parents; and (d) the ability to negotiate between the pressure to achieve and the acceptance of peers; and experimentation with a wide array of behaviors, attitudes, and activities (Dryfoos, 1990).

The unique challenges of early adolescence result from developmental changes at both the individual and the social/environmental levels. This heightens the potential for both positive and negative outcomes. Positive changes occur when the needs of the developing adolescent and the opportunities afforded them by their social environments match (Eccles et al., 1993).

Most adolescents master these developmental tasks and make a relatively successful transition into adulthood. However, some experts estimate that as many as 20% of all adolescents are troubled and must cope with environmental situations which put their future at risk. The Adolescent Health Survey found adolescence to be fraught with anxiety, distress, and some very real perils that put a significant number of youths at risk for emotional, social, and health related problems (Blum, Harris, Resnick, & Rosenwinkel, 1989).

While there is a wealth of information available about adolescents and their transitional experiences in general, specific information about youths in military families is limited. This is the case because research on the military has focused primarily on the military individual, the family as a group, or both. Few researchers have examined the 354,233 adolescents, between the ages of 11 and 17, in military families.[5] Adolescents who have an active duty parent

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[5] The source of this adolescent population count is a 1995 DMDC (Defense Manpower Data Center) data file received by the Military Family Institute with installation counts for 11-17 year-olds.

are faced with the additional challenges of family relocation and the deployment of the military member. Furthermore, military families living overseas may face additional strains of culture shock, language deficiency, financial difficulties, social isolation, and health problems (Nice & Beck, 1978). Therefore, this project investigated how the normal developmental tasks of adolescence and the specific challenges facing youth who live in a military family relate to their well-being.

A model, (Figure 1) refined for understanding the life of adolescents who live in a military family, guided the development of the researchers' questions.

Figure 1   Conceptual Framework for Military Adolescent Project
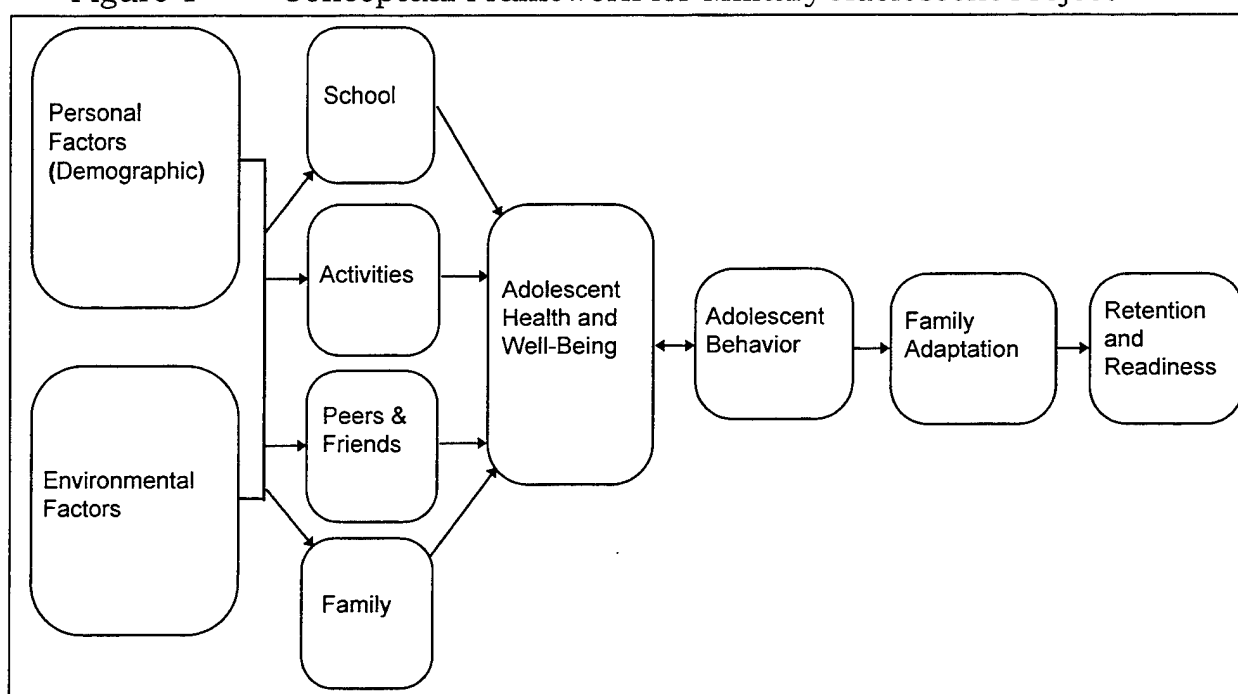
Several research items were advanced to investigate the health, mental health, activities, and behaviors of these youths. Additional items focused on their environment. These included their experiences and perceptions with respect to school, peers, family, and the military. This technical report is organized into sections based on the research questions.

The research questions addressed in the survey were:
1. What are the health status and well-being of adolescents aged 10 through 18 residing in a military family?
2. To what extent do these adolescents engage in antisocial behaviors?
3. How many of these adolescents are using drugs and/or alcohol?

4. In what recreational and leisure time activities are these adolescents engaged?
5. What are the educational experiences and perceptions of school for these adolescents?
6. What experiences do these youths have with peers?
7. What is the quality of the relationship between these adolescents and their families?
8. What experiences have these adolescents had because they are part of a military family?
9. What are the perceptions of these adolescents concerning military family life?

Frequency tables for questionnaire items addressed in this report can be found in Appendix A. Statistical tests which were not significant are not reported in the tables in Appendix A. Thus, tests which are "missing" from the listing in the note following the table can be presumed to be nonsignificant.

2. Methodology

This project used a two-stage stratified probability sampling design. Independent random selection of installations within each service with probability proportional to size occurred in the first stage. In the second stage, adolescents were randomly selected to provide the target number in the sample while keeping overall probability of selection at the individual adolescent level as close to equal as possible. For OCONUS (Outside Continental United States) sites, all members of the population were asked to participate. Thus, sampling for OCONUS was essentially a single-stage, cluster design. Data files identifying potential participants were obtained from Air Force personnel offices, Defense Manpower Data Center (DMDC), and the Department of Defense Dependent School System (DoDDS). Commanders and other pertinent personnel were briefed about the project approximately seven weeks prior to data collection. A letter explaining the project, consent and assent forms, and a letter endorsing the project from the installation commander were sent to the military parents and adolescents in the sample. Parents signed a consent form and all participants signed an assent form.

Administration of the surveys took place at various sites on the installations and youths were divided into three age groups (10-12, 13-14, 15-18) so that they would complete the survey with others of similar ages. All project staff were trained to provide clarification of questions in a way which would not be construed as "leading" participants to any particular answer.

All participants were asked to consider taking part in a thirty to forty-five minute audio taped focus group with others in their age group (10-12, 13-14, 15-18) following completion of the questionnaire. One discussion group for each age group was conducted at each installation visited.[6] These groups provided qualitative data giving a less structured snapshot of adolescents' perceptions of military family life than could be obtained through structured questionnaires.

This technical report describes the participants' responses to specific questions which provide an understanding of their strengths and vulnerabilities. Additionally, the responses were analyzed based on group splits by both military factors and personal characteristics of the respondents. The military factors are: service of military parent (Army, Air Force, Marine Corps, & Navy); location of the installation to which the military parent is assigned (CONUS [Continental United States] or OCONUS); and pay group of the military parent (E1-E6, E7-E9, & Officer). The personal characteristics are gender (male or female); age group (10-12, 13-14, 15-18);[7] and race (self identified as White or Black).[8] Throughout the report, analyses are frequently referenced in terms of percentages of adolescents whose parents belong to the various categories. For the sake of brevity, the categories will be simply referenced by category name (e.g., E1-E6 refers to adolescents who reported that their parents belong to that pay group and Army refers to adolescents who indicated that their military parent is in the Army). The location of the tables of interest is included at the beginning of each results and discussion section. Wherever possible, comparative data from studies with civilian populations are presented.

Throughout the report, whenever statistically significant differences are reported between groups utilizing analysis of variance, they also are presented in terms of the associated effect size index (Cohen's [1988] **d** statistic). The use of **d** values when reporting the results of social science research is becoming increasingly prevalent due to the ever-present danger of statistical significance being equated with "practical importance." In research involving large samples of subjects (as with this project), it is very common for extremely small differences between groups to attain statistical significance, i.e., $p < .05$. The **d** value represents the difference between groups in terms of standard deviation units, and thus is independent of the original scale of measurement.

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[6] Discussion groups were not held at the Okinawa, Japan installations.

[7] It should be noted that the intended sampling frame for this project included only 11-17 year-olds. The data files that were provided by DMDC contained only year of birth information for the adolescents. As a result, a number of individuals were included in the sample who were 10 or 18 years-old. A decision was made to retain these individuals in the sample. When OCONUS samples were received, they were drawn by grade level. Ten and 18 year-olds were retained in these groups of potential participants as well.

[8] See footnote number 1 in the executive summary of this report.

Therefore, the **d** statistic provides an indicator of the degree of practical significance of a given group difference.

A comprehensive description of the methods utilized in this study can be found in Appendixes B, C, and D. Appendix B presents the sampling design. Appendix C covers the data collection procedures. Appendix D consists of the briefing packet that each installation commander and relevant personnel received during the initial project briefing. Appendix E contains a copy of the questionnaire used for data collection. Appendix F presents a discussion of interpretation of **d** values as well as material of relevance to the data analysis (for example, how the weighting of the data was carried out, response rates, and information regarding what statistical tests were used for the analyses).

3. Participants

A total of 6,382 adolescents who live in a military family provided usable data on the questionnaire. Tables 3-1 through 3-7 present both the weighted and unweighted data. Weights were applied to the data to adjust for differing probabilities of selection and response rates across installations. Each service was weighted independently. Therefore, within each service there is no difference in frequencies between the weighted and unweighted counts as there is with the other variables examined. For the other variables (e.g., pay and age group, etc.) the weighted and unweighted counts will differ according to the representativeness of the group of respondents with respect to the overall population of military adolescents. The total n listed in each of the following tables represents the number of adolescents who responded to the subgroup question. In Table 3-2, for example, the weighted count for E1-E4 personnel is slightly higher than the unweighted count. This occurs when the sample underrepresented a given subgroup relative to their presence in the overall population. When a group is overrepresented relative to its proportion in the population, the weighted count will be lower than the unweighted counts (as in Table 3-4 for OCONUS).[9] Differences between the total counts listed (the "n=" value with each table) and the 6,382 mentioned above are due to missing respondent data for the variable in question. All of the population percentages reported in the following tables were calculated from 1995 DMDC data of adolescents aged 11 through 17.

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[9] Readers will notice an exception to this pattern of the effects of weighting with the Air Force respondents. Air Force youth were overrepresented in the sample, yet applying the weighting increased their relative numbers in the sample. This occurred as a result of the constraints that were placed on the range of the weights (limiting the range to a factor of 10 between the largest and smallest) prior to scaling them.

Table 3-1
Service Of Parent

(n=6346)	n	unweighted %	n	weighted sample %	% in population
Army	1382	21.8	1793	28.30	36.19
Air Force	2354	37.1	2422	38.23	30.80
Navy	1150	18.1	1448	22.85	25.80
Marine Corps	1460	23.0	673	10.62	7.21

Note. If both parents were active duty military members, the service category used is that of the parent with the higher pay grade. In the case of identical pay grades for both parents, father's service was used.

Note. The percentage noted in the "% in weighted sample" column of this table is the proportion of cases from each of the services that went into all overall sample and subgroup statistic calculations. For calculations of service subgroup values, the proportions in the unweighted "%" column above represent the counts and percentages with valid data for service of parent.

Table 3-2
Parent Pay Groups as Recorded on Questionnaire

	Weighted (n=6291)		Unweighted (n=6300)	
	n	%	n	%
E1-E4	168	2.7	146	2.3
E5-E6	1961	31.2	1798	28.5
E7-E9	2623	41.7	2593	41.2
W1-W5	204	3.2	266	4.2
O1-O3	304	4.8	325	5.2
O4-O5	822	13.1	941	14.9
O6-O10	208	3.3	231	3.7

Note. Where both parents were active duty military members and had different pay grades, the higher of the two pay grades was used.

Table 3-3
Parent Pay Groups Used for Analyses

	Weighted (n=6291)		Unweighted (n=6300)	
	n	%	n	%
E1-E6	2130	33.9	1944	30.9
E7-E9	2623	41.7	2593	41.2
Officers	1538	24.4	1763	28.0

Table 3-4
Location of Data Collection

	Weighted (n=6294)		Unweighted (n=6298)		Population
	n	%	n	%	%
CONUS	5196	82.6	3706	58.8	77.1
OCONUS	1098	17.4	2592	41.2	22.9

Table 3-5
Demographics of the Participants

Gender	Weighted (n=6289)		Unweighted (n=6297)	
	n	%	n	%
Female	3288	52.3	3335	53.0
Male	3001	47.7	2962	47.0
Race	Weighted (n=6164)		Unweighted (n=6166)	
	n	%	n	%
White	3421	55.5	3531	57.3
Black	874	14.2	852	13.8
Indian(Amer)/Eskimo	157	2.6	153	2.5
Asian	476	7.7	479	7.8
Other	1236	20.1	1151	18.7

Note. The "other" race group includes 550 individuals who identified themselves as Hispanic.

Table 3-6
Age Groups of the Participants

Age Group	Weighted (n=6286)		Unweighted (n=6303)	
	n	%	n	%
10-12	2370	37.7	2656	42.1
13-14	1929	30.7	1888	30.0
15-18	1986	31.6	1759	27.9

Table 3-7
Respondents Ages

| Age | Unweighted | | | Weighted | Population |
	n	%	n	%	%
11	1029	18.1	882	15.1	18.3
12	1108	19.5	1121	19.2	17.8
13	1010	17.7	997	17.0	16.2
14	878	15.4	932	15.9	14.5
15	775	13.6	825	14.1	12.9
16	530	9.3	629	10.7	10.9
17	366	6.4	467	8.0	9.4

Note. The percentages in this table do not include comparisons for 10 or 18 year-olds since these individuals were not targeted as members of the sample frame.

These comparisons between the population and sample show that the weighting of the data rendered sample proportions across variables reasonably close to the relevant population proportions. Despite the weighting, the data may still include biases which must be considered by users of this report. The overall response rate for this survey was 19.5%.[10] This low response rate raises the issue of possible biases which may be present in the data set. That is, the respondents differ in some important way from the entire population of military adolescents. While the process of weighting the data can minimize the impact of such biases, it does not rule out the possibility that the data obtained may, in fact, not be representative of the entire population of military adolescents.

The weighted sample data do closely resemble the population in terms of distribution across service, location, and age variables.[11] There is no reason to suspect that the current sample was systematically biased in a way that would have affected any of the indicators assessed. As readers will see in the various sections of this report there is fairly close agreement between the responses provided by these military adolescents and comparable data from civilian samples.

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[10] Response rates were also calculated separately by service for CONUS sites and by region for OCONUS (Japan and Europe). There was substantial variability across subgroup response rates. They ranged from a low of 7.1% for Navy CONUS to a high of 31.5% (pooled across services) for Japan. Interested readers are referred to section F.2 of Appendix F for further detail.

[11] Closer correspondence could have been obtained between the weighted data set and the population proportions. Obtaining this correspondence would have meant using weights with an extremely large range. The range of the weights was constrained so that the highest and lowest would not differ by more than a factor of ten.

4. Content Areas

4A. Health Status

Estimates of the prevalence of adolescent health problems have varied. According to the U.S. Congress/Office of Technology Assessment (OTA), one in five of the Nation's 31 million adolescents aged 10 through 18 have at least one serious health problem (Dougherty, 1993). Newacheck and Taylor (1992) estimated that in 1988, 31% of Americans—almost 20 million—under the age of 18 were reported to have one or more chronic physical health conditions. Of these, about 4% were hospitalized to treat their chronic health condition.

Approximately one million children in the United States have such severe illnesses that their activities of daily life are critically affected (Yoos, 1987). Additionally, Luepker (1995) stated that children at risk for chronic illness become high risk adults. Research suggests that the psychosocial and developmental needs of chronically ill children are in general, not disease specific, but are common to most children and families coping with chronic illness (Yoos, 1987). Studies have found that adolescents with chronic disease tend to have higher levels of depression and lower self-esteem than their healthy, age-matched controls (Seigel, Golden, Gough, Lashley, & Sacker, 1990).

Studies of the effects of childhood chronic illness on the family support the notion that both ill children and their siblings have difficulty with developmental tasks (Feeman & Hagen, 1990). When evaluating intellectual and cognitive functioning, Feeman and Hagen found chronically ill children to function poorly, children with chronically ill siblings to function at a fair level, and children without a chronic illness or chronically ill sibling function at the highest level.

The research of Feeman and Hagen (1990) also found pathological family patterns affected the recovery process. The most common pathological patterns found included overanxiousness, resentment, rejection, disinterest and neglect. Parents of chronically ill children also reported loss of control over their parenting skills and discipline patterns, as well as inconsistency in their expectations, limit setting ability, and implementation rules. The relatedness of a number of factors cannot be overemphasized. That is, adolescent health problems can impact upon achievement in school, mental health, family

patterns, and risk taking behaviors. These behaviors and circumstances could, in turn, impact upon the service member's job performance and readiness to deploy.

In addition to chronic health problems in adolescents, approximately half of American youths are at risk for developing cardiovascular disease as adults (Igoe, 1992). Cigarette smoking has increased among teens even though regular use of cigarettes is viewed as risky by 68% of high school seniors. Nevertheless, many youths perceive the risks of smoking as unrealistic (Johnston, O'Malley, & Bachman, 1995). There is evidence of a clear trend indicating that adolescents are becoming increasingly accepting of smoking by their peers (Johnston et al.). This is of major concern since smoking is a leading underlying cause of death for Americans.

Bromnick & Sewell (1994) reported a disturbing downward trend in sports and exercise participation in adolescence. This decrease in adolescent physical activity is of concern due to the connection between exercise during this period and adult health (Bar-Or, 1994).

Health Status: Results
See Tables A1-1 to A1-17 in Appendix A for frequency data.

This section addresses the research question, *what is the health status of adolescents aged 10 through 18 who reside in a military family?*

Data on the following items from the survey are presented.
1. In general, would you say your health is excellent, good, fair, or poor?
2. Do you now have, or in the past, did you have a health condition?
3. How many times per week do you work, play or exercise hard enough to make you sweat and breathe heavily for at least 15 to 20 minutes?
4. Have you ever smoked cigarettes?

General Health: Results
See Tables A1-1 to A1-4 in Appendix A for frequency data.

The majority of the adolescents surveyed reported their perception of overall health to be good (42.4%) or excellent (48.3%). There were statistically significant differences across location, pay, gender, and age groups in terms of perceived health status.
- By location, 49.1% of CONUS adolescents rated their health as excellent, while 41.6% reported it to be good compared to OCONUS with 44.4% stating their health was excellent and 45.7% that it was good.

- Adolescents whose parent was an Officer, 52.6% were more likely to have rated their health as excellent than either the E7-E9 group (46.3%) or the E1-E6 group (48.0%).
- Males provided the most positive perceptions of their health, with 55.7% perceiving their health as excellent compared with 41.7% of females.
- The youngest group was most likely to perceive their health as excellent (54.7%) compared with 43.9% of 13-14 year-olds, and 44.7% of 15-18 year-olds.

Comparison of these military adolescents' overall health with data collected in the National Longitudinal Study (NLS) of Adolescent Health (Udry et al., 1997) reveals a great degree of similarity. Table 4A-1 compares the percentages of adolescents in each self-rating category for overall physical health.

Table 4A-1
Ratings of Overall Physical Health

Group	Excellent	Very Good	Good	Fair	Poor
Military adolescents	48.3%		42.4%	8.2%	1.2%
NLS adolescents	30.9%	37.3%	24.5%	6.1%	1.1%

While the response categories differed slightly for these two samples, the adolescents in the Military Family Institute (MFI) study related good health overall (90.7% better than fair) which is quite close to the NLS findings (92.7% relating their health was better than "fair").

Health Conditions: Results

See Table A1-5 in Appendix A for frequency data.

- The physical health conditions most often reported were orthopedic handicap (2.9% current, 3.9% past), long-term health problem (3.7% current, 4.3% past), and other health impairment (5.1% current, 5.2% past).
- Table 4A-2 describes adolescents who reported having one, two, or three of these conditions. In total, 8.2% of adolescents in the sample indicated that they currently have one or more of these conditions, whereas 8.9% indicated having one or more of these conditions more than 6 months ago.

Table 4A-2
Number of Health Conditions Reported

	Current		More than 6 mos. ago	
	n	%	n	%
One Condition	372	5.8	370	5.8
Two Conditions	90	1.4	111	1.7
Three Conditions	66	1.0	88	1.4

Exercise: Results

See Tables A1-6 to A1-9 in Appendix A for frequency data.

The majority of the participants (57.1%) reported playing or exercising three or more times a week hard enough to make them sweat and breathe heavily for at least 15 minutes. This was followed by those who reported playing or exercising one to two times weekly (31.8%). Only a small percentage reported never performing these activities (11.1%). Percentages differed significantly by gender.

- More males reported exercising three or more times a week (66.0%) than females (48.7%). More females (13.6%) than males (8.4%) also reported never exercising.

Tobacco Use: Results

See Tables A1-10 to A1-17 in Appendix A for frequency data.

The majority of the respondents reported never using cigarettes (62.1%) or chewing tobacco (93.5%). Adolescent cigarette usage varied by service, location, pay, age, and race groups, but not by gender.

- By service, Air Force youths (65.3%) were most likely to report that they had never smoked, compared with 60.4% of Army, 59.8% of Navy and 59.6% of Marine Corps youths.
- By location, more CONUS youths (63.4%) were more likely to report that they had never smoked than OCONUS youths (55.7%).
- Officer adolescents (69.4%) were most likely to state that they had never smoked, followed by E1-E6 (63.2%) and E7-E9 youths (57.0%).
- As age increased, the likelihood of reported never smoking decreased. Over four-fifths (81.2%) of 10-12 year-olds had never smoked followed by 57.9% of 13-14 year-olds and 44.3% of 15-18 year-olds.
- By race group, 69.9% of Black adolescents said they had never smoked compared to 64.8% of White adolescents.

Chewing tobacco use varied by gender, age group, and race.

- Females (97.0%) were more likely than males (89.6%) to have reported never using chewing tobacco.

- The 10-12 year-old group (97.2%) was most likely to say that they had never used chewing tobacco, followed by 13-14 year-olds (93.4%) and 15-18 year-olds (89.2%).
- More Black youths (96.4%) than White youths (92.8%) reported that they never used chewing tobacco.

Comparisons of cigarette usage among these adolescents with youths in the civilian population are reported in Table 4A-3. Cigarette smoking appears to be less prevalent in this sample of military adolescents than in the general population surveyed by the Monitoring the Future (MTF) study (Johnston et al., 1995).

Table 4A-3
Smoking Overall:
Military Adolescents versus Monitoring the Future

	Lifetime		Past 30 Days		Daily	
Grade	MFI%	MTF%	MFI%	MTF%	MFI%	MTF%
8th	42.1	46.4	16.1	19.1	5.5	9.3
10th	49.5	57.6	20.7	27.9	10.3	16.3
12th	53.3	61.9	21.1	29.9	11.7	19.0

Note. MFI=Military adolescents, MTF=Monitoring the Future (Johnston et al., 1995).

Health Status: Discussion

The rates of chronic illness in this sample were significantly lower than the estimates presented in the civilian literature. However, when all of the other conditions contained in the questionnaire item are included, e.g., learning or speech disability, visual handicap, deafness, the overall prevalence of health conditions increases substantially to 19.3% of the sample reporting one or more current health problem and 21.0% stating that they had such conditions more than six months ago. These rates are close enough to those presented in the literature to indicate that there are not substantial differences in the health status of military youths compared to their civilian counterparts. Recommendations from the literature with respect to improving adolescent health in general should be applied to this group as well.

The American Academy of Pediatrics has stated that education and counseling are among the most important elements of childhood health care (Yoos, 1987). Children with a health condition must not only learn to cope with their disease, but must also learn to adapt to life experiences altered as a result of their condition. Because lifestyle factors contribute heavily to the development and process of acute as well as chronic disease, educational and counseling

interventions for children and their parents should be based on promoting healthy lifestyles. Educational programs are found to be effective in combating lifestyle factors contributing to poor health (e.g., school-based anti-smoking education programs have been shown to delay the onset of tobacco use among adolescents) (Igoe, 1992). Health promotion education should not only include information on environmental factors affecting physical health, but include information on the affect of nutrition and exercise in reducing health problems (Bar-Or & Malina, 1995; Bearinger & Gephart, 1987; Luepker, 1995). Therefore, exercise as well as sports programs should be developed or expanded for adolescents (Bromnick & Sewell, 1994). Other recommendations with relevance to health issues in adolescence will be presented in sections on alcohol use and risk-taking behavior.

4B. Mental Health Status and Well-Being

Brandenburg, Friedman, and Silver (1990) reported that 14% to 20% of children in the United States suffer from psychiatric disorders, including 7% who were severely disturbed. Additionally, many of the mental illnesses that are diagnosed in adulthood are reported to have an onset during adolescence (Clark, Smith, Neighbors, Skerlec, & Randall, 1994; Lewinsohn, Klein, & Seeley, 1995). Research on adolescents from Air Force families found evidence of depressive symptoms in 77% of females and 59% of males (Orthner, Giddings, & Quinn, 1987).

Estimates of psychopathology in adolescents in general, are considered conservative, since some individuals, such as high school drop-outs and children who run away from or are driven out of their homes, are not available to investigators. Research has indicated that adolescents who drop-out of school generally display an elevated incidence of psychopathology (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993). Feitel, Margetson, Chamas, & Lipman (1992) studied homeless adolescents and found that 90% of their sample fulfilled the criteria for at least one DSM-III-R[12] (American Psychiatric Association, 1987) disorder and many met the criteria for more than one disorder.

Research by Connelly, Johnston, Brown, Mackay, & Blackstock (1993) found that the prevalence of depression in high school is influenced by the stress and anxiety that result from increasing demands of school life, social adjustment to peers, and new experiences of independence from the family. Self-esteem, the most widely studied facet of well-being (Epstein, 1990), has strong associations

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[12] The DSM-III-R (currently DSM-IV) is the American Psychiatric Association's official diagnostic manual, containing the criteria for the various mental disorders.

with depression and anxiety disorders. Social anxiety, lack of social skills and loneliness have also been found to be associated with low self-esteem (Inderbitzen-Pisaruk, Clark, & Solano, 1992; Schmidt & Robinson, 1992).

Mental Health Status and Well-Being: Results
See Tables A2-1 to A2-11 in Appendix A for data.

This part of the report answers the overall question, *what is the well-being of adolescents aged 10 through 18 who reside in a military family?* Well-being was determined by examining the mental health status of the respondents. Mental health status was determined by scores on five measurements, four standardized instruments[13] and an index of psychological well-being developed by the MFI researchers. Mental health measures included:
1. Self-esteem: Rosenberg (1965) Self-Esteem Scale.
2. Depressed mood: Youth Depression Adjective Checklist (Y-DACL), Carey, Lubin, & Brewer (1992).
3. Anxiety: Trait Portion of the State Trait Anxiety Inventory (STAI), Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983).[14]
4. Optimism: Items addressing general life satisfaction from University of Michigan's Monitoring the Future Project (Johnson, O'Malley, & Bachman, 1991) and National Adolescent Health Resource Center at the University of Minnesota (Blum et al., 1989).
5. An index of psychological well-being (IPW): A composite of measures 1-4 above. The construction of this index is described in a later subsection.

Self-Esteem: Results
See Tables A2-2 to A2-8 in Appendix A for data.

The overall mean self-esteem score was 3.19 with a standard deviation of .55 (scores could range from 1 to 4 with 4 indicating high self-esteem). There were significant differences in mean self-esteem scores by the environmental factors of service, location and pay group, and the personal factors of gender and race.
- Youths whose military parents were in the Navy reported lower levels of self-esteem (3.11) than youths with parents in either the Air Force (3.19), Army (3.20), or Marine Corps (3.23).
- Youths living stateside (3.20) reported higher self-esteem than youths living overseas (3.13).

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[13] Table A2-1 presents the reliability coefficients for the four standardized mental health measures.
[14] Seventeen of the 20 items in the Trait Anxiety portion of the STAI were used. The 3 excluded items did not demonstrate consistent factor loadings across genders.

- Youths with an Officer as their military parent (3.24) reported higher self-esteem than those with a parent in either the E1-E6 (3.18) or E7-E9 (3.17) pay groups.
- Males (3.23) reported higher self-esteem than females (3.16).
- Blacks (3.26) reported higher self-esteem than Whites (3.20).

Depressed Mood: Results

See Tables A2-2 to A2-8 in Appendix A for data.

The overall mean depressed mood (Y-DACL) score was 5.26 with a standard deviation of 4.32 (scores could range from 0 to 22 with 22 indicating the highest level of depressed mood). There were statistically significant differences in the mean score for depressed mood by gender and age group.
- Males reported lower levels of depressed mood (5.05) than females (5.43).
- Younger youths (aged 10-12) reported lower levels of depressed mood (4.73) than either 13-14 year-olds (5.36) or 15-18 year-olds (5.78). The two older groups were not significantly different from one another.

Anxiety: Results

See Tables A2-2 to A2-8 in Appendix A for data.

The overall trait-anxiety score was 2.04 with a standard deviation of .51 (scores could range from 1 to 4 with 4 representing the highest level of trait-anxiety). There was a significant difference in the mean score for anxiety by location, gender, and age groups.
- Youths who lived stateside had lower anxiety scores (2.03) than those who lived overseas (2.09).
- Males reported less anxiety (2.02) than females (2.06).
- Youths aged 10-12 reported less anxiety (1.98) than the 13-14 (2.05) or 15-18 year-olds (2.09). The two older groups were not significantly different from one another.

Optimism: Results

See Tables A2-2 to A2-8 in Appendix A for data.

The overall mean optimism score was 3.13 with a standard deviation of 0.58 (scores could range from 1 to 4 with 4 representing the highest level of optimism). Significant differences in optimism scores were found by location and age groups.
- Adolescents living stateside reported higher levels of optimism (3.14) than their peers living overseas (3.08).

- Respondents in the 10-12 age group reported higher levels of optimism (3.20) than the older age groups: 13-14 year-olds (3.09) and 15-18 year-olds (3.10).

Index of Psychological Well-Being: Results
See Tables A2-9 and A2-10 in Appendix A for data.

The four mental health scales included in the adolescent survey were found to be highly intercorrelated (see Table A2-11, Appendix A for correlations between the scales). Therefore, for the purposes of this report, the mental health scales have been combined into a single "index of psychological well-being" (IPW) score.[15] In Figure 4B-1 the distribution of IPW scores in graphical form are illustrated.

Figure 4B-1

Frequency Distribution of IPW t-scores for Entire Sample
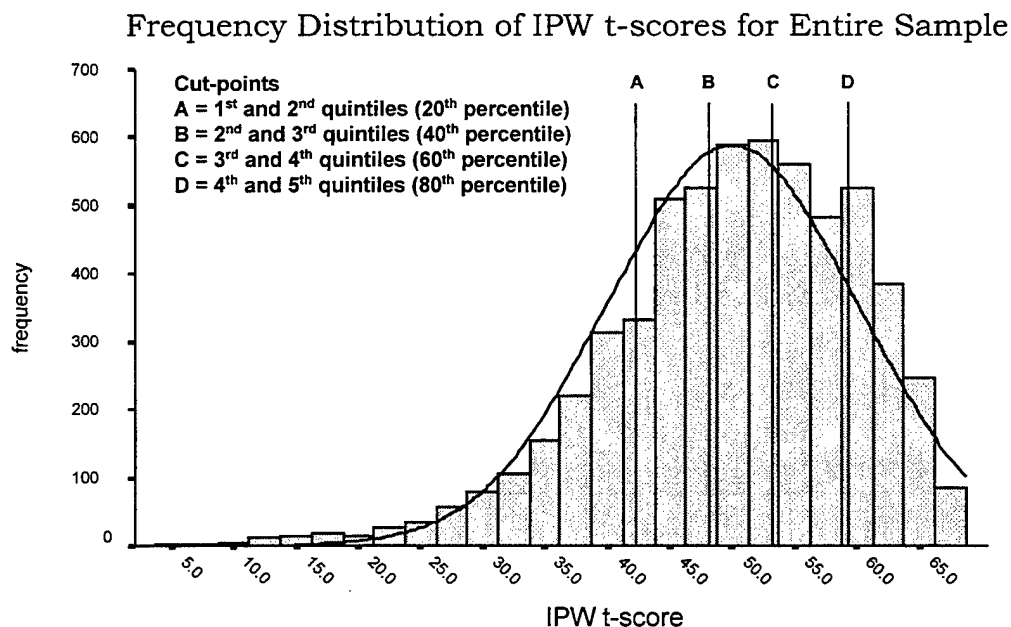
Combining the 55 items which comprise these individual scales into a single composite score results in a scale with an alpha reliability of 0.95. To examine differences between the best and most poorly adjusted members of this sample of adolescents in terms of other attitudes, cognitions, and behaviors, the participants were split into five groups, based on percentile scores on the IPW.

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[15] First, the directionality of scores on the anxiety and depressed mood scales were changed so that increasing scores would indicate lower levels of these states. The four scale scores were then transformed into z-scores, averaging across the four scales. This IPW score has a slightly skewed (-.702) distribution, with a mean of 50 and a standard deviation of 10. Increasing scores on this scale represent greater levels of psychological well-being, operationalized as a composite, consisting of higher self-esteem and optimism, and lower levels of depressed mood and trait-anxiety.

The cut points for these groups are at the 20th, 40th, 60th, and 80th percentiles respectively. Thus, quintile group one (score less than 20th percentile, a cut-off score of 42.28) represents those individuals who, according to their responses to the survey appear to be at relatively high risk for emotional and/or psychological difficulties. These individuals can be viewed as the "poorest functioning group" in terms of psychological well-being. Quintile group number five (score greater than or equal to the 80th percentile, a cut-off score of 59.03) represents the group of adolescents least likely to experience or to have experienced emotional and psychological difficulties. As shown in the frequency distribution in Figure 4B-1, the range of scores falling below the 20th percentile is greater than those falling above the 80th percentile. This leads to a somewhat greater ability to differentiate among lower levels of psychological well-being than higher levels. Examining those individuals reporting lower levels of psychological well-being reveals that about 3.8% of the 5,912 adolescents scored below 30.00 on the IPW scale. This point is 2 standard deviations below the mean. Individuals scoring at or below this point would be considered the group most severely at risk in terms of experiencing psychological distress. This group of respondents will be examined in greater detail in a later report.

Examples of item responses that are typical of those falling within the 1st, 3rd, and 5th quintile groups are provided in Tables 4B-1, 4B-2 and 4B-3, respectively. Each table has two randomly selected cases from the respective quintile group.

Table 4B-1
Well-Being Index Quintile Group 1

Statement	Case #1 Response	Case #2 Response
I feel that I have a number of good qualities[1]	Agree	Agree
I feel I do not have much to be proud of[1*]	Agree	Disagree
I take a positive attitude toward myself[1]	Disagree	Agree
At times I think I am no good at all[1*]	Strongly agree	Agree
How you feel now-today: Awful[2]	Marked	Marked
Good[2*]	Not marked	Not marked
Lucky[2*]	Not marked	Not marked
Lost[2]	Marked	Not marked
I feel pleasant[3*]	Almost never	Often
I feel nervous and restless[3]	Almost always	Often
I am happy[3*]	Sometimes	Often
I have disturbing thoughts[3]	Almost always	Sometimes
I enjoy life as much as anyone[4]	Disagree	Disagree
The future often seems hopeless[4*]	Agree	Disagree

Note. Source 1= Self-Esteem, 2= Depressed Mood, 3= Anxiety, 4= Optimism
Note. *= Item reverse coded for scoring

Table 4B-2
Well-Being Index Quintile Group 3

Statement	Case #1 Response	Case #2 Response
I feel that I have a number of good qualities[1]	Agree	Strongly agree
I feel I do not have much to be proud of[1]*	Strongly disagree	Strongly disagree
I take a positive attitude toward myself[1]	Agree	Strongly agree
At times I think I am no good at all[1]*	Disagree	Agree
How you feel now-today: Awful[2]	Not marked	Not marked
Good[2]*	Marked	Marked
Lucky[2]*	Not marked	Marked
Lost[2]	Not marked	Not marked
I feel pleasant[3]*	Often	Sometimes
I feel nervous and restless[3]	Often	Sometimes
I am happy[3]*	Almost always	Often
I have disturbing thoughts[3]	Almost never	Sometimes
I enjoy life as much as anyone[4]	Agree	Agree
The future often seems hopeless[4]*	Disagree	Disagree

Note.   Source 1= Self-Esteem, 2= Depressed Mood, 3= Anxiety, 4= Optimism
Note. *= Item reverse coded for scoring

Table 4B-3
Well-Being Index Quintile Group 5

Statement	Case #1 Response	Case #2 Response
I feel that I have a number of good qualities[1]	Strongly agree	Agree
I feel I do not have much to be proud of[1]*	Disagree	Strongly disagree
I take a positive attitude toward myself[1]	Strongly agree	Strongly agree
At times I think I am no good at all[1]*	Disagree	Strongly disagree
How you feel now-today: Awful[2]	Not marked	Not marked
Good[2]*	Marked	Marked
Lucky[2]*	Marked	Marked
Lost[2]	Not marked	Not marked
I feel pleasant[3]*	Almost always	Almost always
I feel nervous and restless[3]	Almost never	Sometimes
I am happy[3]*	Almost always	Almost always
I have disturbing thoughts[3]	Almost never	Almost never
I enjoy life as much as anyone[4]	Strongly agree	Strongly agree
The future often seems hopeless[4]*	Disagree	Strongly disagree

Note. Source 1= Self-Esteem, 2= Depressed Mood, 3= Anxiety, 4= Optimism
Note. *= Item reverse coded for scoring

The average IPW score for the entire sample was 50 (SD = 10), the range was 5.85 to 68.08. The IPW scores reveal statistically significant differences across groups in every case except pay and race.

- Navy adolescents (48.74) scored lower than the those from the other three services Air Force (50.06), Army (50.07), and Marine Corps (50.27).
- OCONUS adolescents (48.93) scored lower than CONUS youths (50.23).
- Females (49.60) scored slightly lower than males (50.54).
- The 13-14 year-olds (49.63) and 15-18 year-olds (49.08) scored lower than the 10-12 year-olds (51.17).

Table 4B-4 presents the **d**-values corresponding to the group differences for the statistically significant group comparisons of IPW scores.[16]

Table 4B-4
Magnitude of Difference of Mean IPW Score
for Statistically Significant Group Comparisons

Comparison	d value	Comparison	d value
10 to 12 yr. old-15 to 18 yr. Old	0.21	CONUS-OCONUS	0.13
10 to 12 yr. old-13 to 14 yr. Old	0.15	Army-Navy	0.13
Marine Corps-Navy	0.15	Male-Female	0.09
Air Force-Navy	0.13		

Considered in terms of the associated effect sizes, it is reasonable to state that only the difference across age groups is likely to have any practical significance. It is not surprising to find some increase in terms of potential for psychological difficulties with increasing age as the literature is very clear that incidence of mental disorders, especially depressive disorders, does increase throughout the adolescent years (Kaslow, Doepke, & Racusin, 1994).

Mental Health Status and Well Being: Discussion

In terms of comparative civilian data, this sample of military adolescents reported higher levels of self-esteem than O'Brien et al. (1996) found in a meta-analysis of gender differences in self-esteem (21 studies utilizing the Rosenberg (1965) with adolescents, M=3.06 vs. current sample M=3.19, t(6234)=18.27, p<.001, **d**=.25). Comparison with Y-DACL data collected by Carey et al. (1992) reveals statistically significant differences for the overall sample[17] as well as for

[16] According to Cohen (1988) **d** values around 0.2 are considered "small", around 0.5 are "medium", and around 0.8 are considered "large" effects. Interested readers may refer to section F1 of Appendix F for further elaboration on **d** values.

[17] The overall Y-DACL mean for the current sample was calculated with data from 11-17 year-old respondents to allow comparison with Carey, et al. (1992) data. The data from the 10 and 18 year-old respondents was excluded **only** for the comparisons with the data from Carey et al. For all other analyses the data from the 10 and 18 year-old respondents was included.

11, 12, and 14 year-olds. However, caution should be used when interpreting these differences since the comparison data (Carey et al.) for these age groups was based on sample sizes of 54, 61, and 191, respectively. When 99% confidence intervals were calculated for both sets of means, they were overlapping for all age groups. There are essentially no differences between the current sample of military adolescents and findings reported on a civilian sample (Carey et al.). The trait anxiety data from these military adolescents did not differ significantly from normative data provided by Spielberger et al. (1983).

This sample of military adolescents does not appear to differ substantially from civilian groups in terms of self-esteem or trait anxiety, both of which are significantly associated with psychopathology. In fact, this sample presented with slightly higher self-esteem than has been reported in the adolescent literature. Overall, the data indicated military adolescents were faring at least as well as civilian youths. However, as in the civilian population, there are clearly some youths who are at risk for emotional and psychological difficulties.

While there were a number of statistically significant group differences on the various mental health measures very few were of a magnitude that were likely to have any practical significance. The only consistent differences to emerge across multiple measures were by age groups, with younger respondents faring better than their older peers in terms of optimism, anxiety, depressed mood, and overall well-being.

Analyses based on these data found a number of significant predictors of psychological difficulties (Leitzel, Jeffreys, VanBell and O'Brien, 1997). Social belongingness and family satisfaction accounted for a substantial proportion of the variance in well-being scores. This indicates adolescent well-being may be buttressed by assisting youths in quickly developing a sense of belonging with their peers, especially given the frequent moves that are encountered by military youths. The process of identity formation that occurs during adolescence can be quite stressful, especially for females. Therefore, peer mentoring programs, designed to assist youths with successfully meeting the developmental challenges of this period would be of great benefit. Parental involvement in school, sports, community, and youth activities should be encouraged. Adoption and expansion of "family friendly" policies on the part of the military would facilitate such involvement.

While this sample included a relatively small percentage of youths who would be considered at imminent risk for emotional/psychological difficulties, these individuals should be identified and afforded appropriate treatment. Screening programs could be initiated in school settings to identify those adolescents who

are in need of such services. This group of adolescents may require costly treatment, thus early identification and treatment will represent significant cost savings to the military. In addition, mental health problems in adolescents take a tremendous toll on their parents, possibly leading to an inability to deploy or premature separation from the service.

4C. Antisocial Behavior

Delinquency

According to Dryfoos (1990), delinquency is conceptualized as a wide range of behaviors that are socially unacceptable acts that occur in childhood. These acts can range from relatively harmless disobedience to violent and destructive illegal behaviors.

Recent research has focused on determining the precursors of delinquency. In general, researchers tend to agree that several factors, or pathways of influence, lead to problem behavior (Allen, Leadbeater, & Aber, 1994; Quinn, Sutphen, Michaels, & Gale, 1994; Sullivan & Wilson, 1995; Wright & Wright, 1994). Significant predictors of delinquency have been found to include (a) poor family functioning (Achenbach, Howell, McConaughy, & Stanger, 1995; Bischof, Stith, & Whitney, 1995; Farrington, 1995; LeBlanc, 1994; Pedersen, 1994; Rowe & Flannery, 1994; Towberman, 1994); (b) low intelligence and poor school attainment (Farrington; LeBlanc); (c) attention problems and impulsiveness (Achenbach et al.; Rowe & Flannery); (d) stressful experiences (Achenbach et al.); as well as (e) previous delinquent behavior (Achenbach et al.; Farrington; LeBlanc; Rowe & Flannery). Additionally, behaviors associated with adolescent delinquency are involvement with drugs, alcohol (Allen et al.; Dembo, Williams, Fagan, & Schmeidler, 1994), and peer delinquency (Aseltine, 1995; Joseph, 1995; Rowe & Flannery).

Some research findings suggest that groups of adolescents may become delinquent for different reasons. For example, Tolan and Thomas (1995) found that peer interactions were more significant predictors for males, whereas school and family variables were more influential for females. The same study reported differences related to age of onset, with results indicating that, for those who become delinquent prior to age 12, there is a greater chance of committing more serious acts over a longer period.

Losel and Bliesener (1994) studied "protective" factors that appear to function to keep high-risk adolescents from developing conduct problems. Specifically, they report that "resilient" high risk adolescents are somewhat more intelligent,

flexible, approach-oriented, and active. These youths generally have a more accepting attitude and perceive their surroundings in a more positive manner. Other studies have suggested that commitment to school and/or education may mediate the effects of other precursors of delinquency (Jenkins, 1995; Joseph, 1995).

Antisocial Behavior: Results

See Tables A3-1 to A3-12 in Appendix A for frequency data.

This segment discusses the overall question, *to what extent do these adolescents engage in antisocial behaviors?* Extent was determined by the number of times in the last year the adolescent reported engaging in several forms of misconduct. A factor analysis procedure determined two classes of antisocial behavior, mild/moderate and serious. A thorough discussion of the factor analysis procedure follows the reporting of frequency data. Mild/moderate antisocial behavior was represented by the statements:

- Bet money on games, activities or sports
- Been in a fight where a group of friends fought another group
- Carried a weapon such as a gun, knife, club
- Taken something from a store without paying for it
- Stolen something from school, a student or a teacher
- Brought alcohol or drugs to school
- Damaged property on purpose
- Had contact with the police because of something they thought you did
- Broken the law but were not caught.

Serious antisocial behavior was indicated by the statements:

- Hurt someone badly enough that they had to be seen by a doctor/hospital
- Been convicted of a crime
- Been given a ticket for a traffic offense besides speeding
- Been arrested for something other than a traffic violation.

Mild/Moderate Antisocial Behavior: Results

See Tables A3-1, A3-2, A3-4, A3-5, A3-7, A3-8, A3-10 and A3-11 in Appendix A for frequency data.

The majority of the adolescents reported they had never engaged in any of the mild/moderate antisocial behaviors. However, a minority reported engaging in such behaviors. Table 4C-1 presents the self-reported percentages engaging in these acts.

Table 4C-1
Percentages of Youths Engaging in Mild/Moderate Antisocial Behaviors

Behavior	Never	Once	More than once
Bet money on games, activities or sports	58.3%	19.6%	22.1%
Been in a fight where a group of friends fought another group	78.2%	12.5%	9.3%
Carried a weapon such as a gun, knife, club	86.1%	5.8%	8.1%
Taken something from a store without paying for it	73.0%	12.2%	14.7%
Stolen something from school, a student or a teacher	72.5%	14.6%	12.8%
Brought alcohol or drugs to school	91.4%	3.3%	5.2%
Damaged property on purpose	76.8%	12.0%	11.3%
Had contact with the police because of something they thought you did	77.7%	13.3%	8.9%
Broken the law but were not caught	71.6%	11.5%	17.0%

Tables 4C-2 to 4C-5 illustrate the statistically significant group differences in frequency of engaging in these antisocial acts.

Table 4C-2
Statistically Significant Service Differences
in Mild/Moderate Antisocial Behaviors

	Army	Air Force	Navy	Marine Corps
Shoplifted	27.6%[1,3]	23.9%[1]	34.3%[2]	32.2%[2,3]
Broke law but not caught	29.6%[1,2]	28.0%[1]	31.9%[1,2]	33.2%[2]

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4C-3
Statistically Significant Location and Pay Group Differences
in Mild/Moderate Antisocial Behaviors

	CONUS	OCONUS	E1-E6	E7-E9	Officers
In a group fight	20.7%	27.2%	25.3%[1]	22.3%[2]	15.9%[3]
Carried a weapon	12.8%	19.6%	14.5%[1,2]	15.3%[1]	11.1%[2]
Shoplifted	25.6%	34.0%	28.7%[1]	29.9%[1]	19.2%[2]
Stole from school	26.3%	33.9%	29.6%[1]	29.2%[1]	21.5%[2]
Took drugs/alcohol to school	7.4%	14.3%	7.4%[1]	10.3%[2]	6.8%[1]
Damaged property purposely	22.0%	29.4%	22.1%[1]	25.6%[2]	20.3%[1]
Had contact with the police	21.1%	28.6%	24.7%[1]	23.6%[1]	16.6%[2]
Broke law but not caught	26.9%	36.4%	28.9%[1]	30.4%[1]	24.2%[2]

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4C-4
Statistically Significant Gender and Age Differences
in Mild/Moderate Antisocial Behaviors

	Female	Male	10-12	13-14	15-18
Bet money	30.9%	53.3%	36.6%[1]	45.0%[2]	44.4%[2]
In a group fight	16.8%	27.2%	20.5%[1]	24.9%[2]	19.7%[1]
Carried a weapon	6.6%	21.8%	8.4%[1]	14.8%[2]	19.4%[3]
Shoplifted	24.5%	29.6%	17.8%[1]	30.1%[2]	34.4%[3]
Stole from school	22.3%	33.2%	22.5%[1]	32.6%[2]	30.0%[2]
Took drugs/alcohol to school			3.0%[1]	10.0%[2]	12.6%[2]
Damaged property purposely	18.2%	28.6%	14.9%[1]	27.8%[2]	28.5%[2]
Had contact with the police	14.3%	30.9%	13.9%[1]	25.3%[2]	28.7%[2]
Broke law but not caught	24.0%	33.1%	14.9%[1]	30.1%[2]	42.3%[3]

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".
Note. Blank cells for a given variable indicate that there was not a statistically signifi-cant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4C-5
Statistically Significant Race Group Differences
in Mild/Moderate Antisocial Behaviors

	White	Black
Bet money	37.6%	44.8%
In a group fight	17.4%	25.8%
Shoplifted	21.6%	32.2%
Stole from school	21.9%	32.4%
Had contact with the police	18.5%	26.4%
Broke law but not caught	24.7%	31.9%

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".

The patterns in these percentages revealed some consistent trends. Youths who lived overseas, with a parent who was an enlisted service member, who were male, in the older two age groups, or Black, were consistently more likely to have engaged in the various kinds of misconduct in the mild/moderate category.

Serious Antisocial Behavior: Results
See Tables A3-3, A3-6, A3-9, and A3-12 in Appendix A for frequency data.

Most of the adolescents reported they had never engaged in any of the serious antisocial behaviors. However, a small percentage reported they had
- hurt someone badly (10.5%)
- been convicted of a crime (7.6%)
- received a ticket for something besides speeding (3.6%)
- been arrested (6.6%).

There were no statistically significant differences by service in terms of frequency of engaging in any of these acts. There were significant differences by location, pay, gender, age, and race groups.

Tables 4C-6 through 4C-8 present the percentages of youths in various categories who indicated they had engaged in these acts. Blank cells in these tables indicate that there was not a statistically significant difference between groups.

Table 4C-6
Statistically Significant Location and Pay Group
Differences in Serious Antisocial Behaviors

	CONUS	OCONUS	E1-E6	E7-E9	Officers
Hurt someone badly	9.6%	15.3%	11.5%[1]	11.6%[1]	7.6%[2]
Convicted of a crime	6.3%	13.2%	8.8%[1]	7.8%[1]	5.0%[2]
Ticket for other than speeding	3.1%	5.6%			
Had been arrested	5.7%	10.6%	7.5%[1]	6.8[1,2]%	4.7%[2]

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".
Note. Blank cells for a given variable indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4C-7
Statistically Significant Gender and Age Differences
in Serious Antisocial Behaviors

	Female	Male	10-12	13-14	15-18
Hurt someone badly	5.9%	15.5%	7.6%[1]	12.5%[2]	11.8%[2]
Convicted of a crime	4.5%	10.5%	5.7%[1]	8.8%[2]	8.2%[1,2]
Ticket for other than speeding	2.6%	4.5%	1.4%[1]	2.7%[1]	6.6%[2]
Had been arrested	4.1%	8.9%	3.4%[1]	7.7%[2]	8.7%[2]

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4C-8
Statistically Significant Race Group Differences
in Serious Antisocial Behaviors

	White	Black
Hurt someone badly	7.5%	12.3%
Convicted of a crime	5.8%	10.3%
Ticket for other than speeding	2.7%	4.6%
Had been arrested	4.8%	7.6%

Note. The percentages in this table represent the proportion of respondents who answered the question with anything other than "Never".

The patterns in these percentages revealed trends identical to those in the mild/moderate antisocial behavior data. That is, youths living overseas with a parent who is an enlisted service member, who are male, in the older two age groups, or Black, appear to have more consistently engaged in the various types of serious antisocial behaviors.

Table 4C-9 compares this sample of military adolescents and NLS data (Udry et al., 1997) for damaging property, shoplifting, hurting someone badly enough that they needed medical attention, and participating in a group fight. Military adolescents were slightly more likely to report that they had deliberately damaged property and were slightly less likely to state that they had hurt someone badly enough that they needed medical attention during the past year. Reported rates of shoplifting and participating in a group fight were very similar across the two samples.

Table 4C-9
Comparison of Military Adolescent and NLS
Respondent: Antisocial Behaviors

Deliberately Damaged Property	Never	Ever
Military adolescents	76.8	23.3
NLS adolescents	82.2	17.8
Shoplifted		
Military adolescents	73.0	26.9
NLS adolescents	75.4	24.6
Hurt Someone Badly		
Military adolescents	89.5	10.5
NLS adolescents	81.2	18.9
Participated in group fight		
Military adolescents	78.2	21.8
NLS adolescents	80.0	19.9

Factor Analysis of Antisocial Behavior Items

Factor analysis, with varimax rotation, was run in order to construct scales to facilitate more meaningful comparisons between groups in terms of levels of antisocial behavior. The analysis revealed that these thirteen items loaded on two factors. These factors were labeled *mild/moderate antisocial behavior* and *serious antisocial behavior.* Factor 1 (mild/moderate) consisted of nine of the thirteen items, had an eigenvalue of 5.63, and accounted for 43.3% of the variance in the group of items. This scale has a Cronbach Alpha reliability coefficient of 0.86. Factor 2 (serious) consisted of four of the thirteen items, had an eigenvalue of 1.28, and accounted for 9.9% of the variance in the group of items. This scale has a Cronbach Alpha reliability coefficient of 0.75. See Tables A3-10, A3-11, and A3-12 in Appendix A for factor analysis and inter-

item correlations. Descriptive analyses for the two factors for the entire sample can be seen in Table 4C-10, and medians are presented as well since these distributions had a noticeable degree of positive skewness.[18]

Table 4C-10
Antisocial Behavior Scale Overall Means: Mild/Moderate and Serious

	Mean	Median	SD	N	Max.	Min.
Mild/Moderate Antisocial Behavior	1.43	1.22	0.62	6162	5	1
Serious Antisocial Behavior	1.11	1.00	0.35	6184	5	1

In Table 4C-11, two cases scoring 1.22 and their responses were selected to illustrate the types of responses that would give an individual a score around the median for the mild/moderate antisocial behavior scale.

Table 4C-11
Mild/Moderate Antisocial Behavior Item Responses
for Typical Respondents

In the last year, about how many times have you...?	Case 1	Case 2
Bet money on games, activities or sports	none	once
Been in a fight where a group of friends fought another group	none	none
Carried a weapon such as a gun, knife or club	none	none
Taken something from a store without paying for it	none	once
Stolen something from school, a student or a teacher	once	once
Brought alcohol or drugs to school	none	none
Damaged property on purpose	once	none
Had contact with police because of something they thought you did	none	none
Broken the law but were not caught	none	none

- Over 71% of those respondents with valid data for the mild/moderate antisocial behavior scale scored at or below 1.43 on the scale.
- On the serious antisocial behavior scale, the mean of 1.11 indicates that the majority of the respondents answered "none" to all four of the items in the scale with a number of respondents answering "once" to only one of the items. As can be seen in Table A3-3 in Appendix A, the most frequently endorsed item in this scale is "Hurt someone badly enough that they had to see a doctor/hospital."

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[18] The median value in a distribution of scores represents the point at the center of the distribution of scores, that is 50% of scores are above and below this value. In cases of positively skewed distributions, the median is a better measure since the mean represents a somewhat inflated measure of central tendency, in that it is unduly influenced by a relatively low number of extreme scores.

Table 4C-12 presents the magnitude of differences between groups for group comparisons where a statistically significant difference existed. See Table A3-16 in Appendix A for group comparisons.

Table 4C-12
Magnitude of Difference of Mean Antisocial Behavior Scores
for Statistically Significant Group Comparisons

Mild/Moderate Behavior Comparisons	d value	Serious Behavior Comparisons	d value
15-18 yr. old to 10-12 yr. old	0.42	Male to Female	0.24
Male to Female	0.36	OCONUS to CONUS	0.20
13-14 yr. old to 10-12 yr. old	0.33	Black to White	0.20
OCONUS to CONUS	0.23	15-18 yr. old to 10-12 yr. old	0.18
Black to White	0.22	13-14 yr. old to 10-12 yr. old	0.16
E7-E9 to Officer	0.17	E1-E6 to Officer	0.15
Marine Corps to Air Force	0.14	E7-E9 to Officer	0.14
E1-E6 to Officer	0.13	Marine Corps to Air Force	0.09
15-18 yr. old to 13-14 yr. old	0.12		
Army to Air Force	0.09		
Navy to Air Force	0.09		

Note. The **d** values presented in this table are based on the scale scores calculated for mild/moderate and severe antisocial behavior.

The examination of effect sizes revealed a number of differences that are likely to have practical importance. For the mild/moderate behaviors, the age and gender differences are likely to be quite noticeable and the location and race differences, while smaller, are also likely to represent populations where increased attention may be appropriate. For the serious behaviors, only the gender, location, and race group differences are likely to be of any practical significance.

Antisocial Behavior: Discussion

The pattern and magnitude of **d** values in Table 4C-12 further support and clarify the group differences in percentages that were addressed earlier. A general profile of military youths who are at greatest risk for engaging in mild/moderate antisocial behavior would be Black males between the ages of 13-18 living overseas.

Comparisons with available civilian data revealed that these military adolescents were slightly more likely than their civilian counterparts to have damaged property on purpose. Comparisons between these groups on other mild/moderate delinquent acts (shoplifting or participating in a group fight) were very similar. On the other hand, the military adolescent sample was less likely to report that they had hurt someone badly enough that they needed medical attention.

Treatment and prevention programs more frequently address the integrated complex of factors which work together to produce delinquent behavior. According to Sullivan and Wilson (1995, p. 10), "effective intervention rests on comprehensive assessment that can measure the relative and interactive effects of contributory factors...and produce a plan of intervention that is tailored to the problem profile of the youths, family, and community." Examples of such programs that have been piloted in military communities can be found in the Caulkins, Fitzgerald, Model, and Willis (1994) study.

While the majority of respondents did not engage in antisocial behaviors, these behaviors can be highly problematic when they occur. Since some youths report engaging in these behaviors, the military should consider expanding programs to help address these types of misconduct. Implementing these programs overseas may have a higher payoff as a higher percentage of youths living overseas reported engaging in antisocial behaviors.

4D. Alcohol and Drug Use

Despite legislation prohibiting its use by minors, alcohol use is named the number one drug problem for adolescents (Merril & Fox, 1994). According to Johnston et al. (1995), alcohol has been tried by 56% of eight grade students, 71% of tenth grade students, and 80% of high school seniors. Studies have found that adolescent drinking is most common among males and Whites (Augustyn & Simons-Morton, 1995; Johnson, et al.). Additionally, national data indicates that males begin to drink at an earlier age, drink more often and drink more per session than females (Augustyn & Simons-Morton). Alcohol use has been found to increase with age and results in a decrease in academic performance (Escobedo, Chorba, & Waxweiler, 1995). Furthermore, youths who drink alcohol are 7.5 times more likely to use other drugs (Merril & Fox).

The Monitoring the Future study (Johnston et al., 1995) has found that since 1991, there has been a steady increase in the proportion of students reporting drug use in the past year. The PRIDE survey (Parents Resource Institute for Drug Education, 1996) reported 29.5% of adolescents in grades 6-12 used an illicit drug. The most often used illicit substance among adolescents is marijuana (Johnston et al.). Use of this drug has increased in recent years. A troublesome increase has also been found in the use of inhalants by eighth graders (Heyman, et al., 1996).

Golub and Johnson (1994) found that 28% of their sample reported alcohol as their first drug used, 31% reported marijuana as the first drug used while

marijuana in conjunction with other drugs was reported by 61% as the first drugs used. Edwards (1994) reported that inhalants were the first drug used and are the drug of choice for younger adolescents. Alcohol, marijuana, and inhalants, as well as cigarettes, are considered "gateway drugs" (Golub & Johnson). It is believed that hard drug users progress to their use from such gateway drugs.

Differences by personal characteristics remain apparent. Males continue to report more overall illicit drug use than females. Females are more likely to use stimulants. Both groups have shown similar increases in prevalence of use (Johnston et al., 1995). Black youths continue to report lower use of drugs than other groups and White students have the highest rates for drug use such as marijuana, inhalants, alcohol, and cigarettes.

Alcohol and Drug Use: Results

See Tables A3-17 to A3-28 in Appendix A for frequency data.

This section addresses the overall question, *how many of these adolescents are using drugs and alcohol?*
Use of alcohol and drugs was measured by asking
- The participants' self-report of use; and
- How often participants had used alcohol, marijuana, and inhalants during the last 30 days.

Overall, 29.2% of the respondents reported they had ever used alcohol or illegal drugs. There were significant differences in prevalence of use between service, location, pay, gender, and age groups.
- Adolescents with a parent in the Air Force (27.5%) were least likely to report that they had used compared with Navy (33.3%), Marine Corps (32.4%), and Army (32.1%).
- Youths who lived overseas (38.1%) were more likely to use than those who lived stateside (27.5%).
- E7-E9 youths (33.0%) admitted to use more frequently than E1-E6 (26.8%) or Officer youths (26.1%).
- Females reported greater use, 32.6% compared to 25.5% for males.
- Older respondents were most likely to report that they had used drugs. About half (52.4%) of 15-18 year-olds, 28.9% of 13-14 year-olds, and 9.8% of 10-12 year-olds reported use of drugs.

Among youths reporting they had ever used drugs or alcohol, the drug of choice during the last 30 days was alcohol (55.6%), followed by marijuana (20.2%) and inhalants (9.0%). Statistically significant differences in the use of

these drugs were found by location and age group. Only inhalant use was significantly different across age groups. Although there were gender differences in lifetime use of alcohol or any illegal drug, there were no statistically significant differences by gender for use during the past 30 days.

- A larger percentage of youths living overseas reported using alcohol (62.9%) and inhalants (13.9%) than those living stateside (53.5% & 7.9%, respectively). However, a larger percentage of youths living stateside related using marijuana (21.7%) than those overseas (15.1%).
- The younger two age groups (10-12 & 13-14) were more likely to have used inhalants (16.1% & 14.5%) than the older age group (4.9%).

Overall prevalence of drug and alcohol use was lower in this sample of military adolescents than reported in the PRIDE (1996) data. In fact, the current samples prevalence of 29.2% lifetime use of alcohol or any illicit drug, is lower than the PRIDE study's estimate of 29.5% of respondents using an illicit drug during the past year. Comparisons with the data from the Monitoring the Future Study (Johnston et al., 1995) are presented in Tables 4D-1 through 4D-3. Readers will note that the MTF sample reported greater use of each substance at every grade level and across both time frames than these military adolescents.

Table 4D-1
Alcohol Use: Military Adolescents
versus Monitoring the Future

	Lifetime		Past 30 days	
	MFI %	MTF%	MFI %	MTF%
8th Grade	26.9	55.8	16.6	25.5
10th Grade	48.8	71.1	27.1	39.2
12th Grade	50.5	80.4	27.6	50.1

Note. MFI=Military adolescents, MTF=Monitoring the Future

Table 4D-2
Inhalants Use: Military Adolescents
versus Monitoring the Future

	Lifetime		Past 30 days	
	MFI %	MTF%	MFI %	MTF%
8th Grade	9.3	19.9	5.1	5.6
10th Grade	7.9	18.0	3.1	3.6
12th Grade	5.3	17.7	1.3	2.7

Note. MFI=Military adolescents, MTF=Monitoring the Future

Table 4D-3
Marijuana Use: Military Adolescents
versus Monitoring the Future

	Lifetime		Past 30 days	
	MFI %	MTF%	MFI %	MTF%
8th Grade	11.3	16.7	6.7	7.8
10th Grade	21.9	30.4	10.6	15.8
12th Grade	25.0	38.2	7.6	19.0

Note. MFI=Military adolescents, MTF=Monitoring the Future

Alcohol and Drug Use: Discussion

The literature has generally indicated that males and White youths are more likely to use alcohol and other substances. The data provided by these military adolescents did not support such a pattern. There were no statistically significant differences between either gender or race groups in terms of alcohol, marijuana, or inhalant use in the past 30 days.

Edwards (1994) asserted that inhalants are the first drug used and drug of choice for younger adolescents. This finding was corroborated in the current data. The two younger age groups (10-12, 13-14) were more likely than older youths (15-18) to use inhalants. This is problematic because inhalants are considered a gateway drug, that is, use of inhalants often is followed by use of "harder" substances.

The majority of respondents did not report using alcohol or drugs, but since these behaviors can be quite problematic for those who engage in them, the military should consider expanding current programs. Programs should be considered for implementation overseas as a higher percentage of youths living overseas reported alcohol use and antisocial behaviors.

Another possibility that must be considered when examining these data is that there may be substantial underreporting of actual use due to adolescent fears of reprisals against themselves or their active duty military parent. A zero tolerance policy—whereby youths caught using are required to leave the installation—hinders obtaining accurate estimates of substance use rates. Furthermore, avenues to appropriate treatment for those in dire need of rehabilitation services may become blocked because of real or perceived sanctions.

4E. Recreational and Leisure Activities

The inclusion of activity in one's daily life has been a trademark of good physical and mental health, increased self-esteem, and positive interpersonal relationships (Roth & Holmes, 1985, 1987). During adolescence, activity can facilitate the tasks of prevention, development, or formation in a variety of areas (Simons, Epstein, McGowan, Kupfer, & Robertson, 1985; Losel & Bliesener, 1994). Activity assists in the creation of adolescents' personality and construction of their identity. Adolescents utilize extracurricular activity to express themselves and to cultivate and discover their talents and creative capacities. Extracurricular activity is seen as an integral part of the educational process providing students opportunities to develop interpersonal, social, and leadership skills. Student participation is seen as enthusiastic involvement in class activities and extracurricular activities such as athletics, the arts, and specialized clubs sponsored by the school. Students who become actively engaged in academic and extracurricular activities experience a sense of belonging which contributes to their integration within their school community (Benard, 1991). Such adolescent adjustment to environmental context is believed to contribute to a smooth progression through the developmental stages of puberty (Fenzel & Blyth, 1986), and greater participation is linked with academic achievement (Voelkl, 1995).

Williams-Scaife (1994), in a report on adolescents of U.S. military families overseas, found that adolescents who participate in extracurricular activities are less likely to use drugs, alcohol, or tobacco than students who do not participate in such activities. In a study of seventh and eigth graders, Shilts (1991) assessed students level of drug and alcohol use, participation in extracurricular activities, peer influence, and personal attitudes. Three distinct groups of students were identified: abusers, users, and nonusers. The students in the abusers group claimed that, overall, they had minimal involvement in extracurricular activities and spent more of their time with friends than family. The nonusers were highly involved in activities and reported spending more time with their family than friends.

Rathunde (1993) conducted a study to learn which activities elicited the most adolescent involvement. Extracurricular activities, rather than those of productive work and socializing were favored. With extracurricular activities, adolescents associate a need for refined skills to meet the challenges that the tasks present. Extracurricular activities provide the greatest level of interest and achieve the most attention from adolescents. The author concluded that maintaining extracurricular activities and encouraging adolescents to

participate is crucial to positively influencing attitudes about school which in turn leads to healthy development of adult roles.

Finally, Steitz and Owen (1992) conducted a study of 212 sophomores and 230 juniors to understand the effects of school activities and employment on the self-esteem of adolescents. They found that adolescents spending over 20 hours working per week had more negative experiences (i.e., drug or alcohol abuse, less participation in extracurricular activities, delinquent behavior, and negative views of employment) than those who did not work or who worked less than 20 hours. Additionally, working was associated with lower self-esteem, especially in girls. These authors (1992) also found that adolescents' participation in athletic activities was linked with higher self-esteem for both boys and girls. Therefore, it is evident that adolescent involvement in extracurricular activity plays a major role in all parts of their lives. The level of this participation influences peer and familial relationships, education, substance use or abuse, self-perception, and self-esteem.

Recreational Activities: Results
See Tables A4-1 to A4-20 in Appendix A for frequency data.

This section discusses the overall question, *are these adolescents engaging in recreational and leisure time activities?* These activities were assessed by five items:
1. How often do you use the youth center at your base or post?
2. How often do you use youth programs, other than the ones at the youth center?
3. What school and community activities have you been in during the last year?
4. In a typical week, how many days do you participate in sports, recreation, or other extracurricular activities.
5. Leisure activities, asking respondents how often they do each of the following when they have free time outside of school:
   - watch TV
   - do homework
   - work at a paying job
   - hang out with friends
   - do volunteer work
   - other

Youth Centers/Youth Programs: Results
See Tables A4-1 to A4-8 in Appendix A for frequency data.

- While many youths (42.4%) reported using the youth centers on base or post, 20.7% stated that they used it only for special events. Only 12.6% of

the respondents reported using the youth center on a regular basis (once a week or more).

- The majority of young people (67.3%) reported some use of youth programs off base or post, 33.2% of the adolescents use such programs at least once a week. These programs were attended only for special events by 24.1% of respondents.
- There were statistically significant differences in patterns of usage of youth centers on installations by service, location, pay, gender, age, and race groups. Such differences existed across only pay, gender and age groups for off installation youth programs. Tables 4E-1 through 4E-4 illustrate the differences between these groups in frequency of youth center usage.

Table 4E-1
Statistically Significant Differences in Youth
Center/Program Usage by Service

	Army[1]	Air Force[2]	Navy[1]	Marines[3]
On base/post	51.3%	44.9%	52.5%	37.1%

Note. The percentages listed in this table indicate any use the Youth Center/Program.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-2
Statistically Significant Differences in Youth
Center/Program Usage by Location and Pay Group

	CONUS	OCONUS	E1-E6	E7-E9	Officers
On base/post	39.1%	58.6%	49.0%[1]	41.1%[2]	35.1%[3]
Off base/post			64.6%[1]	65.1%[1]	75.1%[2]

Note. The percentages listed in this table indicate any use the Youth Center/Program.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-3
Statistically Significant Differences in Youth
Center/Program Usage by Gender and Age Group

	Female	Male	10-12	13-14	15-18
On base/post	39.1%	45.9%	52.2%[1]	43.4%[2]	29.4%[3]
Off base/post	71.0%	63.5%	69.8%[1]	69.3%[1]	62.0%[2]

Note. The percentages listed in this table indicate any use the Youth Center/Program.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-4
Statistically Significant Differences in
Youth Center/Program Usage by Race Group

	White	Black
On base/post	37.6%	56.3%

Note. The percentages listed in this table indicate any use the Youth Center/Program.

Activities During the Last Year: Results

See Tables A4-9 to A4-12 in Appendix A for frequency data.

The activities that the respondents most frequently reported being involved in were sports teams outside of school (40.5%), church activities (38.8%), band/chorus (38.1%), athletic teams (36.8%), school clubs (35.2%).

Activities that were least frequently reported included student government (10.7%), service clubs (17.0%), other (18.8%), and youth organizations (20.1%).

A small percentage (10.0%) reported they did not participate in any of the activities listed on the survey. There were statistically significant differences in rates of participation in various activities by service, location, pay, gender, age, and race groups. These analyses were conducted using the Chi-Square statistic. Post-hoc group comparisons were not conducted on categorical level variables, thus there is no indication of specific group differences. See Tables 4E-5 through 4E-8 for statistically significant differences between groups.

Table 4E-5
Significant Differences in Activities During Last Year by Service

	Army	Air Force	Navy	Marine Corps
Athletic teams	44.0%	33.4%	38.3%	40.5%
Sports teams outside school	40.8%	44.7%	40.9%	46.0%
Other	17.2%	19.7%	19.0%	15.3%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity during the past year.

Table 4E-6
Significant Differences in Activities During Last Year
by Location and Pay Group

	CONUS	OCONUS	E1-E6	E7-E9	Officers
Athletic teams			32.7%	37.4%	42.7%
Band/chorus			39.1%	35.3%	42.2%
Youth organizations	19.3%	23.7%	18.3%	17.9%	27.0%
Church activities			33.4%	37.2%	50.1%
Service clubs			12.6%	17.9%	22.3%
School clubs			31.6%	35.3%	40.9%
Sports teams outside school	39.3%	47.6%	36.1%	39.2%	50.0%
Other			16.6%	19.0%	22.5%
None of the above			12.3%	11.5%	4.0%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity during the past year.
Note. Blank cells for an activity indicate that there was not a statistically significant difference between the groups in question.

Table 4E-7
Significant Differences in Activities During Last Year
by Gender and Age Group

	Female	Male	10-12	13-14	15-18
Athletic teams	32.7%	41.6%	28.7%	37.2%	46.7%
Band/chorus	45.2%	30.8%	44.7%	42.4%	26.9%
Student government	12.9%	8.6%			
Youth organizations	17.7%	22.6%	24.6%	18.6%	16.1%
Church activities	44.0%	33.6%	35.0%	40.4%	42.1%
Service clubs	19.3%	14.6%	11.3%	13.2%	27.8%
School clubs	41.5%	28.5%	33.2%	33.8%	39.2%
Sports teams outside school	32.5%	49.4%	47.4%	43.0%	30.5%
Other	22.4%	15.1%	17.1%	18.1%	21.9%
None of the above	8.2%	11.7%	8.5%	9.8%	11.8%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity during the past year.
Note. Blank cells for an activity indicate that there was not a statistically significant difference between the groups in question.

Table 4E-8
Significant Differences in Activities
During Last Year by Race Group

	White	Black
Athletic teams	34.5%	40.4%
Youth organizations	22.5%	17.7%
Service clubs	18.2%	14.1%
Sports teams outside school	44.0%	38.7%
Other	19.5%	13.5%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity during the past year.

Examination of these group differences revealed a consistent pattern: Youths in Officers' families are generally more involved in a wider range of activities than either enlisted group.

Leisure Activities: Results

See Tables A4-17 to A4-20 in Appendix A for frequency data.

This segment of the report addresses the overall question, *are these adolescents engaging in leisure time activities?* Leisure activities were measured by asking how often the adolescents perform each of the following when they have free time outside of school:

- watch TV
- do homework
- work at a paying job

- hang out with friends
- do volunteer work
- other

- Hanging out with friends (52.7%) was the most frequently reported activity, followed by watching TV (47.7%), doing homework (44.4%), working at a job (11.8%), and doing volunteer work (5.7%). It is encouraging that 27.2% reported doing volunteer work with some degree of regularity, that is they did so often or sometimes. Interestingly, 67.4% of the respondents reported that they often engage in some other activity during their free time after school.

Table 4E-9
Significant Differences in Participation in Leisure Activities by Service

	Army	Air Force	Navy	Marine Corps
Watch TV	50.0%[1]	45.1%[2]	44.9%[2]	47.2%[1,2]

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity often.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-10

Significant Differences in Participating in Leisure Activities
by Location and Pay Group

	CONUS	OCONUS	E1-E6	E7-E9	Officers
Watch TV			51.9%[1]	48.4%[1]	41.5%[2]
Hang Out With Friends	51.6%	57.9%	50.8%	54.1%	53.0%
Do Homework			43.2%[1]	43.2%[1]	48.6%[2]
Do Volunteer Work	5.6%	6.0%	5.2%[1]	6.0%[1]	6.2%[2]
Work at Job	11.1%	15.1%	10.3%	13.2%	11.6%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity often.
Note. Blank cells for an activity indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-11

Significant Differences in Leisure Activities During Last Year
by Gender and Age Group

	Female	Male	10-12	13-14	15-18
Watch TV	45.5%	50.1%	49.5%[1]	51.8%[1]	41.9%[2]
Do Homework	49.9%	38.1%	53.7%[1]	40.9%[2]	36.4%[2]
Do Volunteer Work	7.0%	4.2%			
Work at Job			8.3%[1]	8.7%[2]	19.1%[3]
Other	69.1%	65.8%	62.2%[1]	67.3%[2]	77.1%[3]

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity often.
Note. Blank cells for an activity indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4E-12

Significant Differences in Leisure Activities
During Last Year by Race Group

	White	Black
Watch TV	44.1%	63.5%
Do Volunteer Work	5.9%	5.7%

Note. The percentages in this table represent the proportion of respondents who indicated that they had participated in the activity often.

In Tables 4E-9 to 4E-12 there is no clear pattern to the group differences. In general, the differences between groups are not very large.

Sports or Other Recreational Activities: Results
See Tables A4-13 to A4-16 in Appendix A for frequency data.

A large percentage of youths participated at least once a week in sports (63.7%), with 15.7% participating one day a week, 26.8% two to three days a week and 21.2% four to five days a week. These percentages differed by location, pay, gender, and age groups. There were no statistically significant differences by race groups.

- More OCONUS youths (68.3%) participated in sports than CONUS adolescents (62.6%).
- Significantly more Officers' children participated (74.7%) than E7-E9 (62.5%) and E1-E6 (57.8%).
- More males reported participating (65.7%) than females (61.8%).
- Older adolescents were more likely to participate (67.9% of 15-18 year-olds) than 13-14 year-olds (63.6%) or 10-12 year-olds (60.0%).

Table 4E-13 presents a comparison of involvement in selected activities[19] between the military adolescent data and data collected for the NLS study. While the proportions for hanging out with friends and participation in sports are different across the two samples, these differences are not large. The proportion of youths not watching television is almost identical across the samples.

Table 4E-13
Comparison of Military Adolescent Activities with NLS Data

Activity (MFI wording and response categories)	Activity (NLS wording and response categories)	MFI %	NLS %
Watch TV	Watch TV		
never	does not watch TV	1.6	1.9
rarely, sometimes, or often	Range of 1-99 hours	98.3	98.1
Hang out with friends	Hang out with friends		
never	not at all	2.8	9.5
rarely, sometimes, or often	1 or 2, 3 or 4, or 5 or more	97.2	90.5
Participate in sports, recreation program, or other extracurricular activity	Played an active sport		
none	not at all	36.3	29.5
1 day, 2-3 days, 4-5 days	1 or 2, 3 or 4, or 5 or more	63.7	70.5

Note. The NLS wording of this sports participation item asks for number of times during the past week. The MFI respondents were asked to report on their involvement in such activities "after school." It is quite likely that this difference in wording between the items accounts for the discrepancy in proportion of respondents participating across the two samples.

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[19] The activities presented are those where the items used in the MFI and NLS projects were similar enough to make comparisons reasonable.

Recreation and Leisure Activities: Discussion

Youth programs on installations seem to be utilized relatively infrequently, and disproportionally by younger youths, males, and Black youths. During the discussion groups on installations, older youths related the perception that there is little available on base and that the centers exist solely for younger children.

Efforts should be increased to ensure that young people are aware of the activities that are available. Military adolescents should be involved in the planning of the activities that will be offered by the youth programs on installations in order to ensure a good fit between what is offered and what adolescents have an interest in doing.

> *Me and my dad were talking about it and they should open a big skating rink or a dance club for 16 to 18 that stays open until 1 or 2 in the morning, no alcohol. Because there are a lot of teenagers around here that like to dance and stuff. They need to open things like that for just the older people.*
>
> --Military Adolescent

Overall, this sample of adolescents does seem to be quite involved with school and community activities. Few respondents (10.0%) said that they were not involved in any school or community activities. In the National Longitudinal Study of Adolescent Health (Udry, et al., 1997), the most similar civilian comparison data available to the authors, 17.1% said they were not involved in any school activities.

While this group of respondents does seem to be similar to civilian youths in terms of participation in activities, the military can encourage appropriate behavior by providing young people with a selection of activities that compliments those available in their schools and communities off base or post. Involvement in appropriate activities is important because such participation has been identified as a protective factor against negative behaviors during adolescence (Losel & Bliesener, 1994).

4F. Educational Experiences

One of the most important factors that impact on the well-being of adolescents in military families is the frequent changing of schools and the subsequent adjustment to new school cultures (Humke & Schaefer, 1995; Kantor, 1965; Truscott, 1989; Wertsch, 1991). A school culture that integrates the

adolescent into the activities of the school is thought to reduce the potential negative impact of school transitions. Various researchers have identified components of school culture that include student relationships with teachers, peers, and the administration (Paredes, 1993; West, 1985), practices responsive to the needs of adolescents (Epstein & MacIver, 1990), availability of resources (Ferreira, Bosworth, & Smith, 1995), safety (Meier, 1996), and warmth (Voelkl, 1995).

Current grades in the major content areas are believed to be indicators of school success (Bowen, Richman, & Desimone, 1993). Parental involvement has been documented as an important variable affecting adolescents' school grades and overall achievement. The components of parental involvement seem to be organized around two contexts, the home and the school (Benard, 1991).

Classroom behavior is also related to school performance (Down & Rose, 1991). Although some negative behaviors are expected as the adolescent individuates, patterns of numerous instances of negative behaviors such as absences, tardiness and vandalism as well as violent behaviors jeopardize opportunities for academic success. Disruptive school behaviors have also been identified with peer group influence (Downs & Rose).

Educational Experiences: Results

See Tables A5-1 to A5-31 in Appendix A for frequency data.

This section answers the overall question, *what are the educational experiences and perceptions of school for these adolescents?* Educational experiences and perceptions were measured by
1. Number of schools attended
2. Interactions with teachers
3. School spirit, behavior rules, & discipline
4. Respondents negative behaviors and experiences
5. Safety in schools
6. Parental involvement
7. Grade point average (GPA) as determined by the youths reported last grades received in English, mathematics, science, and social studies.

Number of Schools Attended: Results

See Tables A5-1 to A5-2 in Appendix A for frequency data.

The number of schools attended ranged from one to ten or more. The mean number of schools attended is 5.15 (*SD* = 2.03), the median and mode are both 5. The mean number of schools attended differed significantly by service, pay, and age groups, but not by location, gender or race groups.

- The mean number of schools attended by adolescents whose parent were in the Army was 5.49, Marine Corps youths reported attending 5.37, on average. This mean was significantly higher than those for Air Force (5.07), and Navy (4.74) adolescents, which did not differ significantly from one another.
- The group of adolescents whose parents were Officers had a significantly higher mean number of schools attended (5.56) than either the E7-E9 (5.08) or E1-E6 (4.99) groups.
- As expected, the mean number of schools attended rose significantly as age increased. The mean number of schools attended was 4.34 for 10-12 year-olds, 5.30 for 13-14 year-olds, and 5.99 for 15-18 year-olds.

Interactions with Teachers: Results

See Tables A5-3, to A5-6 in Appendix A for frequency data.

Interactions with teachers were measured by six statements:
1. Students get along well with teachers.
2. The teaching is good.
3. Teachers are interested in students.
4. When I work hard on schoolwork, my teachers praise my effort.
5. Most of my teachers really listen to what I have to say.
6. In class I often feel "put down" by my teachers.

With regard to interactions with teachers, 55.0% of the respondents noted that students got along with teachers; 75.8% reported that teacher instruction was good; 68.5% agreed that teachers were interested in the students; 67.7% said teachers really listened; and 62.0% stated that teachers praised student efforts. Only 17.5% of the respondents agreed that teachers "put down" students. There were statistically significant differences in respondents' perceptions of interactions with teachers by service, location, pay, gender, age, and race groups. Tables 4F-1 to 4F-4 present significant differences between groups for the items in this section.

Table 4F-1
Statistically Significant Service Differences in Interactions with Teachers

	Army	Air Force	Navy	Marine Corps
Get along with teachers	49.7%[1]	58.5%[2]	53.2%[1]	50.0%[1]
Teaching is good	68.7%[1]	79.8%[2]	71.7%[1]	73.1%[1]
Teachers interested in students	66.6%[1]	71.1%[2]	62.9%[1]	64.4%[1]
Teachers really listen	63.6%[1]	69.1%[2]	62.8%[1,2]	64.6%[1,2]
Feel put down by teachers	19.4%[1]	16.4%[1]	24.2%[2]	20.8%[1,2]

Note. The percentages in this table represent the proportion of respondents who answered the question with "agree" or "strongly agree".
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-2
Statistically Significant Location and Pay Group
Differences in Interactions with Teachers

	CONUS	OCONUS	E1-E6	E7-E9	Officers
Get along with teachers	57.2%	44.8%	50.0%[1]	55.5%[2]	61.0%[3]
Teaching is good	77.7%	66.8%	74.0%	66.4%	77.5%
Teachers interested in students	70.3%	60.5%	67.3%[1]	66.0%[1]	74.9%[2]
Teachers praise efforts	63.8%	53.4%			
Teachers really listen	69.7%	58.0%	67.3%[1,2]	66.4%[1]	70.7%[2]
Feel put down by teachers	15.4%	26.4%			

Note. The percentages in this table represent the proportion of respondents who answered the question with "agree" or "strongly agree".
Note. Blank cells for a given variable indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-3
Statistically Significant Gender and Age Differences
in Interactions with Teachers

	Female	Male	10-12	13-14	15-18
Get along with teachers	56.4%	54.0%	55.7%[1]	48.2%[2]	61.3%[3]
Teaching is good			80.7%[1]	72.4%[2]	74.1%[2]
Teachers interested in students			72.6%[1]	66.0%[2]	66.7%[2]
Teachers praise efforts	64.7%	59.3%	68.1%[1]	57.2%[2]	59.7%[2]
Teachers really listen	70.6%	65.0%	72.0%[1]	62.7%[2]	68.6%[2]
Feel put down by teachers	15.5%	19.3%	18.9%[1]	17.5%[2]	15.2%[2]

Note. The percentages in this table represent the proportion of respondents who answered the question with "agree" or "strongly agree".
Note. Blank cells for a given variable indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-4
Statistically Significant Race Group Differences
in Interactions with Teachers

	White	Black
Get along with teachers	59.7%	47.5%
Teaching is good	79.3%	72.6%
Teachers interested in students	71.7%	63.9%

Note. The percentages in this table represent the proportion of respondents who answered the question with "agree" or "strongly agree".

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School Spirit, Behavior Rules, & Discipline: Results

See Tables A5-7 to A5-10 in Appendix A for frequency data.

School spirit, behavior rules, and discipline were measured by respondents' level of agreement with three statements:
1. There is a real school spirit.
2. Rules for behavior are strict.
3. Discipline is fair.

The majority of adolescents agreed that there is a real school spirit (53.7%), behavior rules are strict (62.0%), and discipline is fair (60.5%). Tables 4F-5 to 4F-8 present significant differences between groups for the items in this section.

Table 4F-5
Significant Differences in School Spirit, Rules, & Discipline
by Service

	Army	Air Force	Navy	Marine Corps
School spirit	45.2%[1]	60.2%[2]	50.5%[1]	51.1%[1]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-6
Significant Differences in School Spirit, Rules, & Discipline
by Location and Pay Group

	CONUS	OCONUS	E1-E6	E7-E9	Officers
School spirit	56.1%	41.5%	49.9%[1]	54.5%[1]	58.1%[2]
Discipline is fair	61.9%	53.5%	57.1%[1]	59.7%[1]	66.1%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-7

Significant Differences in School Spirit, Rules, & Discipline
by Gender and Age Group

	Female	Male	10-12yr	13-14	15-18
School spirit			54.1%[1]	50.1%[2]	57.6%[1]
Behavior rules are strict			62.4%[1]	63.3%[2]	60.1%[2]
Discipline is fair	63.3%	57.8%	65.6%[1]	56.5%[2]	59.1%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-8

Significant Differences in School Spirit,
Rules, & Discipline by Race Group

	White	Black
School spirit	58.0%	47.3%
Discipline is fair	63.9%	54.5%

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Other Student's Behavior: Results

See Tables A5-11 to A5-14 in Appendix A for frequency data.

Student behavior was measured by three statements:
1. Other students often disrupt class.
2. Disruptions by other students get in the way of learning.
3. Misbehaving students often get away with it.

The majority of the adolescents agreed that students disrupt class (76.0%), disrupt learning (59.7%), and get away with it (54.5%). Tables 4F-9 to 4F-11 present the statistically significant differences between groups for the items in this section.

Table 4F-9

Significant Differences in Other Students' Behavior by Service

	Army	Air Force	Navy	Marine Corps
Misbehaving students get away	56.8%[1]	51.2%[2]	55.9%[1]	54.1%[1,2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-10
Significant Differences in Other Students' Behavior
by Pay Group

	E1-E6	E7-E9	Officers
Students disrupt class	77.4%[1,2]	76.9%[1]	72.6%[2]
Students disrupt learning	61.4%[1]	59.7%[1,2]	57.5%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-11
Significant Differences in Other Student's Behavior
by Gender and Age Group

	Female	Male	10-12	13-14	15-18
Students disrupt class			77.5%[1]	79.7%[1]	70.8%[2]
Students disrupt learning			65.9%[1]	57.6%[2]	54.3%[2]
Misbehaving students get away	51.3%	58.2%	48.8%[1]	57.9%[2]	57.9%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Respondents' Negative Behaviors and Experiences: Results

See Tables A5-15 to A5-22 in Appendix A for frequency data.

Respondents were asked to indicate *how many times each of the following had happened to them during the current school year.*
1. Was late for school
2. Cut or skipped class
3. Got in trouble for not following rules
4. In-school suspension
5. Suspended or put on probation
6. Transferred for disciplinary reasons
7. Sent to office for misbehavior
8. Sent to office due to problem with schoolwork
9. Received a warning about attendance
10. Received a warning about grades
11. Received a warning about behavior

Table 4F-12 presents the overall percentages of adolescents who indicated that they had engaged in any of the behaviors or experienced any of the consequences listed.

Table 4F-12
Overall Frequency of Negative Behaviors and Experiences

Was late for school	68.9%	Sent to office for misbehavior	27.8%
Cut or skipped class	21.1%	Sent to office due to problem with schoolwork	7.8%
Got in trouble for not following rules	57.5%	Received a warning about attendance	14.4%
In-school suspension	12.4%	Received a warning about grades	36.7%
Suspended or put on probation	8.8%	Received a warning about behavior	24.4%
Transferred for disciplinary reasons	1.2%		

There were statistically significant differences by groups for the majority of these experiences and behaviors in terms of frequency of occurrence. Tables 4F-13 through 4F-16 present these frequencies by subgroups for all of the statistically significant comparisons.

Table 4F-13
Statistically Significant Service Differences in
Negative Behaviors and Experiences in School

	Army	Air Force	Navy	Marine Corps
Was late for school	71.3%[1]	66.4%[2]	75.6%[3]	71.3%[1,2]
Cut or skipped class	21.8%[1,2]	18.5%[1]	24.5%[2]	23.6%[2]
Got in trouble for not following rules	60.1%[1]	56.9%[2]	59.1%[1,2]	60.7%[1]
In-school suspension	13.9%[1]	9.9%[2]	10.9%[2,3]	14.8%[1,3]
Suspended or put on probation	10.5%[1]	7.3%[2]	9.6%[1,2]	10.7%[1]
Transferred for disciplinary reasons	1.8%[1,2]	0.7%[2]	1.4%[1,2]	2.0%[1]
Sent to office for misbehavior	31.0%[1]	25.8%[2]	29.0%[1,2]	30.4%[1,2]
Received a warning about attendance	15.1%[1]	10.2%[2]	18.2%[1,3]	21.2%[3]
Received a warning about grades	41.7%[1,3]	32.6%[2]	45.3%[1]	36.4%[2,3]
Received a warning about behavior	28.3%[1]	21.8%[2]	25.2%[1,2]	27.2%[1]

Note. The percentages in this table represent the proportion of adolescents who related at least one occurrence of the behavior/experience during the past year.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-14
Statistically Significant Location and Pay Group Differences in Negative Behaviors and Experiences in School

	CONUS	OCONUS	E1-E6	E7-E9	Officers
Was late for school	67.6%	76.2%	69.3%[1,2]	70.8%[1]	65.8%[2]
Cut or skipped class	20.4%	24.6%	18.3%[1,2]	23.9%[1]	20.1%[2]
Got in trouble for not following rules	55.9%	64.7%	58.7%[1]	58.3%[1]	53.4%[2]
In-school suspension			15.8%[1]	12.9%[2]	6.8%[3]
Suspended or put on probation	8.0%	12.0%	11.4%[1]	9.7%[1]	4.0%[2]
Transferred for disciplinary reasons	0.9%	2.4%			
Sent to office for misbehavior	26.8%	32.5%	32.1%[1]	28.8%[1]	19.7%[2]
Sent to office due to problem with schoolwork			7.9%[1]	8.7%[1]	5.9%[2]
Received a warning about attendance	13.2%	20.4%	15.4%[1]	16.3%[1]	9.7%[2]
Received a warning about grades	34.5%	46.2%	40.2%[1]	38.1%[1]	28.7%[2]
Received a warning about behavior	22.9%	30.6%	28.3%[1]	26.1%[1]	15.7%[2]

Note.   The percentages in this table represent the proportion of adolescents who related at least one occurrence of the behavior/experience during the past year.
Note.   Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note.   Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-15
Statistically Significant Gender and Age Group Differences in Negative Behaviors and Experiences in School

	Female	Male	10-12	13-14	15-18
Was late for school			62.4%[1]	69.8%[2]	75.7%[3]
Cut or skipped class			7.1%[1]	19.8%[2]	38.4%[3]
Got in trouble for not following rules	45.9%	70.0%	61.5%[1]	63.2%[1]	46.6%[2]
In-school suspension	7.0%	17.8%			
Suspended or put on probation	5.4%	12.1%	6.5%[1]	9.9%[2]	9.9%[2]
Transferred for disciplinary reasons	0.2%	2.0%			
Sent to office for misbehavior	15.5%	40.6%	29.6%[1]	31.9%[1]	20.5%[2]
Sent to office due to problem with schoolwork	5.6%	9.9%			
Received a warning about attendance	12.4%	16.3%	8.2%[1]	14.0%[2]	21.8%[3]
Received a warning about grades	30.1%	43.6%	30.5%[1]	41.4%[2]	39.1%[2]
Received a warning about behavior	15.5%	33.7%	26.8%[1]	29.4%[1]	15.6%[2]

Note.   The percentages in this table represent the proportion of adolescents who related at least one occurrence of the behavior/experience during the past year.
Note.   Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note.   Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-16
Statistically Significant Race Group Differences in
Negative Behaviors and Experiences in School

	White	Black
Was late for school	64.9%	74.5%
Got in trouble for not following rules	55.0%	65.1%
In-school suspension	9.6%	17.5%
Suspended or put on probation	5.6%	14.9%
Transferred for disciplinary reasons	0.4%	1.9%
Sent to office for misbehavior	23.2%	36.9%
Received a warning about grades	32.6%	42.7%
Received a warning about behavior	19.3%	37.2%

Note. The percentages in this table represent the proportion of adolescents who related at least one occurrence of the behavior/experience during the past year.

Safety in School: Results

See Tables A5-23 to A5-26 in Appendix A for frequency data.

Safety in school was assessed by asking respondents to indicate their level of agreement with the statement "I don't feel safe at this school."

The majority of adolescents (81.4%) reported disagreement with the statement "I don't feel safe at this school;" however, 12.7% agreed with the statement "I don't feel safe" and 5.9% strongly agreed. The percentage of youths reporting that they felt safe differed significantly by service, pay, gender, and age groups.

- More adolescents whose parents were in the Air Force (84.7%) reported feeling safe at school than those whose parents were in the Navy (80.7%), or the Army (79.3%). Marine Corps youths frequency of reporting feeling safe (82.6%) was not significantly different from the other three services.
- More Officer youths (85.4%) reported feeling safe at school than either the E7-E9 (81.8%) or E1-E6 (78.5%) groups.
- More females (82.9%) than males (79.8%) felt safe at their school.
- The 15-18 year-olds (83.3%) and those aged 10-12 (81.5%) were more likely to report that they felt safe at school than the 13-14 year-olds (79.4%).

Table 4F-17 presents a comparison between the MFI and NLS respondents' (Udry et al., 1997) perception of safety in their school. Similar proportions of the two samples felt strongly about being unsafe in their school, while a larger proportion of the military adolescents felt strongly that they were safe in their school.

Table 4F-17
Ratings that School is Unsafe

Group	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Military adolescents	5.9%	12.7%		43.3%	38.1%
NLS adolescents	5.4%	7.9%	23.9%	39.7%	23.1%

Note. The MFI respondents indicated their agreement (on a four point scale) with the statement "I don't feel safe at this school" while the NLS item asked for respondent's agreement (on a five point scale) with the statement "I feel safe in my school." NLS responses were reversed for purposes of this comparison.

Parental Involvement: Results

See Tables A5-27 to A5-30 in Appendix A for frequency data.

Four statements assessed levels of parental involvement in their adolescents' schoolwork: How often do your parent(s)
1. Check on whether you have done your homework?
2. Help you with your homework?
3. Give you special privileges because of good grades?
4. Limit privileges because of poor grades?

- A large percentage of respondents indicated that their parents were actively involved in their education by checking homework (69.3%), helping with homework (69.3%), and rewarding good grades (67.5%) sometimes or often. A large proportion of the parents (60.1%) also were reported to limit privileges due to poor grades either sometimes or often.
- Frequency of parents checking homework differed significantly by service, pay, gender, and age groups. How often parents helped with homework differed by service, pay, and age groups. Giving special privileges for good grades and limiting privileges for bad grades both differed in frequency across pay, gender, age, and race groups. Tables 4F-18 to 4F-21 present the statistically significant group differences.

Table 4F-18
Significant Differences in Parental Involvement by Service

	Army	Air Force	Navy	Marine Corps
Parents check homework	68.9%[1,2]	72.0%[1]	66.7%[2]	67.2%[2]
Parents help homework	68.8%[1,2]	72.2%[1]	66.1%[2]	68.0%[1,2]

Note. The percentages in this table represent the proportion of respondents who indicated that their parents "sometimes" or "often" engaged in the behavior in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-19
Significant Differences in Parental Involvement
by Pay Group

	E1-E6	E7-E9	Officers
Parents help homework	72.0%[1]	67.1%[2]	68.6%[1,2]
Special privileges for grades	69.7%[1]	67.7%[1]	64.3%[2]
Limit privileges for grades	60.5%[1,2]	61.9%[1]	56.5%[2]

Note.   The percentages in this table represent the proportion of respondents who indicated that their parents "sometimes" or "often" engaged in the behavior in question.
Note.   Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-20
Significant Differences in Parental Involvement
by Gender and Age Group

	Female	Male	10-12	13-14	15-18
Parents check homework	66.4%	72.7%	79.7%[1]	69.2%[2]	57.1%[3]
Parents help homework			81.2%[1]	71.1%[2]	53.6%[3]
Special privileges for grades	69.5%	69.0%	73.7%[1]	67.6%[2]	59.3%[3]
Limit privileges for grades	54.6%	66.2%	54.7%[1]	62.7%[2]	63.3%[2]

Note.   The percentages in this table represent the proportion of respondents who indicated that their parents "sometimes" or "often" engaged in the behavior in question
Note.   Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note.   Percentages which share a superscript within each row do not differ significantly from each other.

Table 4F-21
Significant Differences in Parental
Involvement by Race Group

	White	Black
Special privileges for grades	65.0%	66.9%
Limit privileges for grades	57.8%	66.9%

Note.   The percentages in this table represent the proportion of respondents who indicated that their parents "sometimes", or "often" engaged in the behavior in question.

Grades: Results

See Table A5-31 in Appendix A for means and standard deviations.

The GPA was determined by the adolescents' report of the last grade they received for English, mathematics, science, and social studies.[20]

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[20] GPA was calculated for each respondent by averaging their grades across the four subjects. Grades were coded on a four point scale, F=0, D=1, C=2, B=3, & A=4. The GPA was calculated only for those respondents who provided responses to at least three of the subjects listed.

The overall grade point average was 3.03 (*SD* = .81). Significant differences in GPA were found by service, location, pay, gender, age, and race.

- Significant differences in GPA were found between the Air Force youths (3.11) and youths in other service families: Army (3.05), Navy (2.95), and Marine Corps (2.98). Army adolescents were also higher than their Navy counterparts.
- Youths living stateside (3.04) had higher GPAs than those living overseas (2.97).
- Adolescents whose parents were Officers had higher GPAs (3.30) than those with parents in the other pay groups (2.97 for E7-E9 and 2.92 for E1-E6).
- Females (3.14) and White youths (3.11) reported higher GPAs than males (2.92) and Black youths (2.85).
- Younger adolescents had significantly higher GPAs (3.16) than those in the older age groups (2.98 for 13-14 year-olds and 2.94 for 15-18 year-olds).

Educational Experiences: Discussion

There are several important findings in this section. First, adolescents in military families described themselves as academically successful. Second, the number of school transitions does not appear to have had an adverse impact on academic grades. Third, many parents maintain some involvement with their children's school work. Fourth, the components of school culture identified in the literature as important were generally perceived positively by these respondents. And finally, while the vast majority of all adolescents across services reported never engaging in serious school infractions, a high proportion reported engaging in various minor infractions. Additionally, they were more likely to experience minor consequences for these behaviors.

While these students report doing well in school, they are not without concerns. One discussion group participant said:

> ...it's very hard to move in high school, if you start off first with academics. I mean, let's talk about academics. Every high school I've gone to, something's different, you have to have something different just to graduate, you have to have every honors program, something different. The honors programs are weighted differently, you go to different schools, everything gets thrown up in the air, you're at the mercy of your guidance counselor, to fight for your grade point average.
>
> -- Military Adolescent

The apparent academic success of the majority of these participants may be indicative of satisfaction with school in general. There is clear and convincing

research evidence to demonstrate that those whose parents were actively involved in school activities are more likely to be successful in school than those whose parents do not participate (Bryck, Lee, & Smith, 1990; Brown & Steinberg, 1991; Steinberg, Lamborn, Dornbusch, & Darling, 1992).

Given the prominence of school in the education and socialization of adolescents, it is disconcerting that the respondents in this study reported inappropriate classroom behaviors within the schools. Without careful examination of the classroom environment in which military children learn, academic success may be jeopardized.

The strengths perspective appears to be a viable model for assisting adolescents during school transitions (Saleebey, 1996). School counselors might refocus their assessments from a deficit or problem model to one in which the abilities of the individual as well as the resources in the environment are emphasized. It is important that service providers, military family support personnel, and parents be aware of the relationship between adolescent experiences and school success. Areas that may be targeted for intervention by family support personnel could include (a) enhancing communication between teachers, community service providers, and new arrivals at the school and their families; (b) addressing curricular problems, that is, when course material is being repeated or basic knowledge assumed which may not be present;[21] and (c) working with families to identify and utilize their own strengths and resources to support the educational experiences of military adolescents. One way to facilitate these cooperative connections may be by conducting small task-oriented group sessions to identify ways of coordinating necessary supports.[22]

4G. Relationship with Peers

Adolescence is a time when peers, particularly group members, become important social references (Youniss & Smollar, 1985). The peer group can serve as a bridge between childhood parental dependencies and a sense of autonomy and connection with wider social networks (Newman & Newman, 1991). Peer relations of equality and mutuality are said to be the basis for the development of moral understanding, consensual self-validation, and self-

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[21] Frequent school transitions can result in having to repeat course work or missing necessary prerequisite coursework due to differences in curricula across school districts. Complaints of this nature were voiced by adolescent project discussion group participants. Worries such as "having the right credits and getting good SAT's" so they can get into college were voiced.

[22] One such program, demonstrating Department of Defense (DoD) involvement with the community surrounding an installation is the Partners in Education, Adopt-A-School Program conducted at Ft. Meade and Ft. Hood through the Community and Family Activities Office.

exploration (Youniss, 1980). It is during adolescence that an individual becomes attracted to the opposite sex (Sanderson & Cantor, 1995) and begins to form dating relationships. These dating relationships are critical at this time and lay the groundwork for the development of both adolescent intimacy (Bennett & Westera, 1994) and adolescent identity (Sanderson & Cantor). The prospect of adolescent dating is not an easy one to endure, and it is approached and managed differently by all adolescents (Sanderson & Cantor).

Lack of connection to a peer group can mean that one is left without a source of social support during this period of physical, emotional, and social change (Coleman, 1980). Dunn and McGuire's (1992) study noted that research has examined the unique value of peer relationships in the development of social-cognitive understandings. According to this view, peer social experiences are necessary for developing the skills to relate to others as well attaining assertiveness, morality, fairness, and reciprocity. Lastly, Dunn and McGuire suggest that peer experiences may serve a moderating role; the experience of being supported by peers may provide a buffer from trouble, whereas lack of support from peers may lead to loneliness, inadequacy or resentment.

Relationship with Peers: Results
See Tables A6-1 to A6-24 in Appendix A for frequency data.

This section addresses the overall question, *what experiences do these youths have with peers?* Experiences and perceptions of relationships with peers were assessed by examining respondent accounts of their
- dating status
- large group membership
- small group membership
- identification with friends
- belongingness
- loneliness

Dating Status: Results
See Tables A6-1 to A6-4 in Appendix A for frequency data.

Respondents were asked to answer, "What is your present dating status?"
The majority of youths reported not dating yet (37.0%) or not currently dating (30.1%). However, 20.1% reported casually dating and 12.7% reporting dating seriously. Significant differences in these percentages were found by service, location, pay, gender, age, and race groups.
- More youths with parents in the Air Force reported not dating yet (39.4%) as compared to children of Navy (36.2%), Army (34.1%), or Marine Corps (32.7%) parents.

- Marine Corps youths were most likely to have reported seriously dating (15.1%) compared to their Navy (13.6%) Army (13.5%) and Air Force (11.4%) counterparts.
- More E1-E6 (40.5%) and Officer (39.7%) adolescents reported not dating yet as compared to E7-E9 (32.7%) adolescents.
- More youths with parents in the E7-E9 pay group (15.6%) reported seriously dating than those in the E1-E6 (10.9%) or Officers (10.6%) groups.
- More females (40.4%) than males (33.7%) reported not dating yet.
- Males reported casually dating (22.1%) more often than females (18.2%).
- The youngest age group (10-12) was most likely to have reported not dating yet (61.7%), followed by 13-14 year-olds (34.2%) and 15-18 year-olds (10.9%).
- Older youths were most likely to report seriously dating (26.1% of 15-18 year-olds) relative to the younger groups (9.4% of 13-14 year-olds and 4.1% of 10-12 year-olds).
- White adolescents (40.9%) reported not dating yet more frequently than Black youths (37.1%).
- Black youths (13%) more often reported dating seriously compared with 11.0% of White youths.

Large Group/Small Group Membership: Results

See Tables A6-5 to A6-16 in Appendix A for frequency data.

Respondents answered two questions regarding group membership:
1. Are you part of a crowd or large group of friends at school who have the same interests and do the same kind of things?
2. Are you part of a smaller group of friends who hang around together and talk with one another?

The majority of youths reported being a part of a large crowd or group (65.9%). The proportion who reported belonging to a large group differed by pay, age, and race groups.
- More youths with parents in E7-E9 pay group (68.3%) reported being part of a large group than Officers (65.6%) or E1-E6 (63.3%).
- More youths aged 13-14 (72.6%) reported being part of a large crowd than either the 15-18 (68.3%) or 10-12 year-olds (58.5%).
- More Black youths (70.9%) than White youths (63.2%) reported being a part of a large crowd.

Most of the respondents (74.8%) reported being part of a small group. This percentage differs significantly by pay, gender, age, and race groups.

- More Officers' children (80.1%) than E7-E9 (74.9%) and E1-E6 (70.8%) reported being a part of a small group.
- More females (78.1%) than males (71.3%) reported being a part of a small group.
- More older youths (82.4%) than 13-14 (74.5%) and 10-12 year-olds (69.1%) reported being a part of a small group.
- More White youths (76.4%) than Black youths (69.3%) reported being a part of a small group.

Most of the adolescents reported belonging to some form of a peer group. In this sample of adolescents, 48.1% reported belonging to both a small and a large group, 26.7% said they belonged to only a small group, and 17.8% reported only belonging to a large group. Very few (7.4%) of the respondents said that they did not belong to either a large or small group. Patterns of group membership showed statistically significant differences by pay, gender, age, and race groups.

- E1-E6 youths (9.9%) were more likely to report no group membership than either the Officer (6.7%) or E7-E9 youths (5.8%).
- Males (9.4%) were more likely than females (5.6%) to report not belonging to a social group.
- The 10-12 year-olds were more likely (10.6%) to report no group membership than either the 15-18 year-olds (5.5%) or the 13-14 year-olds (5.1%).
- The largest differences across race groups were in type of group. White adolescents (29.1%) reported only belonging to a small group more often than Black youths (22.4%). Large group only membership showed the reverse pattern with 24.2% of Black and 15.7% of White youths stating they belonged only to a large group.

Identification with Friends: Results
See Tables A6-17 to A6-20 in Appendix A for frequency data

Identification with friends was determined by the degree of agreement or disagreement with four statements:
1. My group of friends is very important to me.
2. I am similar to my group of friends.
3. I have a strong relationship with my group of friends.
4. I am happy to be with my group of friends.

A high percentage of youths reported agreement with these positive aspects of their relationships with their friends:

- 92.4% agreed with "My group of friends is important to me."
- 88.8% said they felt that they were similar to their friends.
- 84.9% indicated they had strong relationships with their friends.
- 96.7% were happy to be with their group of friends.

There were statistically significant differences in frequency of agreement with these statements between services, pay, gender, and age groups. Tables 4G-1 to 4G-4 present the group differences for the statistically significant comparisons.[23]

Table 4G-1
Significant Differences in Identification with Friends by Service

	Army	Air Force	Navy	Marine Corps
Friends important	89.3%[1]	94.1%[2]	92.7%[2]	91.4%[2]
Similar to friends	88.2%[1]	90.8%[2]	86.7%[1,2]	89.5%[2]
Strong relationships	81.9%[1]	85.5%[1,2]	96.5%[2]	84.7%[1,2]
Happy with friends	96.0%[1]	97.5%[2]	96.5%[2]	96.4%[1,2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4G-2
Significant Differences in Identification
with Friends by Pay Group

	E1-E6	E7-E9	Officers
Friends important	91.3%[1]	91.9%[2]	94.7%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

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[23] It should be noted that these tables present data aggregated across the categories of agree and strongly disagree. Thus, where the percentages appear very similar, the statistical significance arises from the difference in distribution of responses across these two response categories.

Table 4G-3
Significant Differences in Identification with Friends
by Gender and Age Groups

	Female	Male	10-12 yrs	13-14 yrs	15-17 yrs
Friends important	94.4%	90.4%			
Similar to friends	89.8%	87.7%			
Strong relationships	88.8%	80.2%	85.6%[1]	84.2%[2]	84.7%[1,2]
Happy with friends	97.2%	96.1%	97.1%[1]	96.4%[2]	96.5%[2]

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.
Note. Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.
Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4G-4
Significant Differences in Identification
with Friends by Race Group

	White	Black
Friends important	94.4%	85.0%
Similar to friends	91.1%	84.6%
Strong relationships	85.6%	80.0%
Happy with friends	97.5%	97.1%

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Belongingness/Social Isolation: Results

See Tables A6-21 to A6-24 in Appendix A for frequency data.

To assess belongingness and social isolation respondents were asked to indicate their level of agreement with the following six statements:
1. I feel alone.
2. I feel lonely.
3. I have lots of friends.
4. I don't have anyone to hang out with or do things with.
5. I am well liked by the kids in my school.
6. I don't have any friends in my class.

About 1 in 5 (20.1%) youths reported social isolation, since most indicated agreement with "I have lots of friends" (83.7%) and "I am liked by school kids" (84.6%), and disagreed with "I feel alone" (79.9%), "I feel lonely" (78.6%), "I have no one to hang out with" (91.7%), and "I don't have any friends" (93.8%).
• There were statistically significant differences across services, locations, gender, age, and race groups. Tables 4G-5 to 4G-8 present the group percentages for statistically significant comparisons.

Table 4G-5
Significant Differences in Belongingness/Social Isolation
by Service

	Army	Air Force	Navy	Marine Corps
Liked by school kids	84.7%[1]	84.6%[1]	81.7%[1]	85.9%[2]

Note. The percentages represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4G-6
Significant Differences in Belongingness/
Social Isolation by Location

	CONUS	OCONUS
Liked by school kids	85.2%	80.8%

Note. The percentages in this table represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Table 4G-7
Significant Differences in Belongingness/Social Isolation
by Gender and Age Group

	Female	Male	10-12 yrs	13-14 yrs	15-18 yrs
Feel alone			16.1%[1]	20.0%[2]	24.5%[3]
Feel lonely	23.8%	18.7%	17.5%[1]	20.6%[2]	26.7%[3]
Have lots of friends	85.1%	82.2%	83.4%[1]	85.1%[1]	83.4%[2]
No one to hang out with	7.5%	8.9%	8.5%[1]	9.2%[1,2]	6.7%[2]
Liked by school kids	86.9%	82.3%			
Don't have any friends	4.6%	7.8%	5.5%[1]	5.9%[2]	6.7%[3]

Note. The percentages in represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Note. Blank cells for a statement indicate that there was not a statistically significant difference between the groups in question.

Note. Percentages which share a superscript within each row do not differ significantly from each other.

Table 4G-8
Significant Differences in Belongingness/
Social Isolation by Race Group

	White	Black
Feel alone	18.4%	19.0%
Feel lonely	20.4%	18.1%
No one to hang out with	7.8%	8.8%
Liked by school kids	84.1%	85.4%

Note. The percentages represent the proportion of respondents who indicated that they "agree" or "strongly agree" with the statement.

Relationship with Peers: Discussion

A frequently emerging theme in the discussion groups was one of conflicting feelings about moving. There was remorse about leaving old friends but excitement about meeting new people and making new friendships. Participants often mentioned how important it was to make a new circle of friends when moving to a new place, in addition to having a "special friend or two."

It appears that military adolescents generally belong to and identify with friendship groups or crowds. This involvement suggests that utilization of these groups for education, prevention, and intervention programs regarding concerns of adolescents could prove fruitful. Natural friendship groups should be identified and the indigenous leaders of each group recruited to act as an advisory council to the installation activity centers. Members of such an advisory council could receive training and education on the concerns of adolescents. In turn, these individuals would develop a mentoring program among the members of their friendship group, take the lead in discussing normal adolescent concerns, and help the group to provide a support system to its members. This advisory group could also develop a system for incorporating newcomers and acculturating them to the new location.

It is important to note that there were a small number of youths who indicated not belonging to any peer group. These adolescents may be considered to be at additional risk for negative outcomes (e.g., mental health problems, delinquency, or drug and alcohol use) given the importance of adolescent peer groups and social belongingness in forging one's identity (Newman & Newman, 1991). While this number was relatively small (7.4%) overall, there were some subgroups (males, 10-12 year-olds, and E1-E6 youths) who appear to be less likely to have this sense of belonging with a group. These adolescents are likely to be missing the developmental benefits that accrue from peer group membership.

Those not identifying with a group may be youths who have recently moved. However, detailed investigation of the socialization processes of military adolescents should be conducted to further determine their strengths and weaknesses in this area. Contrary to what has been generally reported in the literature, (e.g., Newman & Newman, 1991) peer relationships were not associated with family, school, well-being, involvement in activities, or antisocial behaviors (Jeffreys & Leitzel, 1997).

4H. Relationship with Family

Adolescents look to their parents for information about academic, vocational, moral, social, and family issues (Hunter, 1983). Parental rejection or neglect during this period has been connected to depression and low self-esteem (Robertson & Simons, 1989; Rosenberg, Schooler, & Schoenbach, 1989). A caring relationship with a parent or another adult and low family stress are two factors associated with resiliency among adolescents (Blum et al., 1989).

Family environment affects the development of psychosocial problems during adolescence (Ohannessian, Lerner, & von Eye, 1994). Ohannessian et al. found that adolescents who were not satisfied with their families at the beginning of the school year were more likely to report higher levels of depression and anxiety at the end of the school year than were adolescents who initially were more satisfied with their families.

If children have an emotionally supportive relationship with their parents, they are more likely to demonstrate high levels of self-esteem, healthy psychological development, and to incorporate parents' attitudes, values, and role expectations (Amato, 1990). In contrast, parental power and coercion were positively related to the child's observed compliance, but associated with negative outcomes. These children were not likely to internalize their parents' attitudes and values (Peterson, Rollins, & Thomas, 1985).

Research has found that a family climate which promotes participation in family decision making has positive implications for adolescent identity development and self-esteem (Eccles et al., 1993). These researchers also found that adolescents who reported more opportunities to participate in the family's decision-making were more likely than their peers to prefer challenges and independence in academic endeavors.

Effective communication patterns within families facilitate family interaction (Olson et al., 1983) and are associated with social competence in youth (Peterson & Leigh, 1990). Other research has found the parent-child relationship as the strongest predictor of life satisfaction (Armsden & Greenberg, 1987; Heubner, 1991). Parental support, in particular, was found to be positively associated with a general sense of satisfaction with themselves (Young, Miller, Norton, & Hill, 1995). The following patterns have been found in adolescents reporting greater family satisfaction: greater emotional disclosure with their parents (Papini, Farmer, Clark, Micka & Barnett, 1990); increased parental support with limited use of punitiveness (Henry, 1994);

more compliance with parental expectations; and greater quality of life (Schumm, Bugaighis, Jurich, & Bollman, 1986).

From an ecological framework, we know that adolescents influence and are influenced by the settings in which they interact such as family, school, and community (Brofenbrenner, 1979). Further, research indicates that variables such as school involvement and parental support significantly influence youths developing self-concept (Holly, 1987; Covington, 1984). Adolescents' development is enhanced by emotionally supportive environments that afford them opportunities for independence (Eccles et al., 1993). It also appears, from a family development perspective, that families with adolescents face unique challenges as the focus of adolescent identity shifts away from the family and toward the peer group (Olson et al., 1983). Thus, with the ecological and developmental perspectives in mind, future studies should examine the relationship between these settings (i.e., family, school, and community) and how they relate to adolescent development.

Relationship with Family: Results

See Tables A7-1 in Appendix A for scale data.

The question, *what is the quality of the relationships between these adolescents and their families?* and the use of physical punishment are examined in this section. In addition to examining the effect of military factors and personal characteristics on family satisfaction, this segment reports the results in the context of family structure (two biological parents, one biological parent and one stepparent, & single parent) and family housing (on base or post & off base or post).

Family relationships were measured by the Family Satisfaction Scale. This standardized instrument consists of two subscales: adaptability and cohesion. Each subscale consists of seven items. The items for adaptability address decision making, rules, and flexibility. Those for cohesion examine family members' interactions, freedom, openness, and closeness. All items in the Family Satisfaction Scale were addressed on a five-point scale with 5 representing the highest satisfaction, cohesion, and adaptability.

A family satisfaction mean of 3.42 (*SD* = .96); family cohesion mean of 3.48 (*SD* = .96); and family adaptability mean of 3.34 (*SD* = 1.03) were recorded for this sample of military adolescents. Family adaptability is highly correlated with family cohesion (r=.88). Significant differences were found for overall family satisfaction and the subscales of family cohesion and family adaptability by pay, gender, age, and family structure groups, but not by service, location, race, or family housing groups.

- Respondents whose parents were Officers reported higher overall satisfaction (3.50) than adolescents whose parents were in the E7-E9 pay group (3.37). However, E1-E6 youths (3.43) did not differ significantly from either of the other two pay groups.
- Family satisfaction was higher for males (3.53) than for females (3.33).
- Family satisfaction decreased as age increased, 3.70 for 10-12 year-olds, 3.35 for 13-14 year-olds and 3.17 for 15-18 year-olds.
- Adolescents who lived in either two biological parent (3.49) or those in single parent (3.35) households reported higher levels of family satisfaction than those youths living with one biological parent and one stepparent (3.10).

Table 4H-1 presents the magnitude of the differences (**d**-values) between groups.

Table 4H-1
Magnitude of Difference of Family
Satisfaction, Cohesion, and Adaptability for
Statistically Significant Group Comparisons

Overall Family Satisfaction	d value
10-12 yr. old to 15-18 yr. old	0.56
2 parent to 1 stepparent	0.41
10-12 yr. old to 13-14 yr. old	0.37
Single parent to 1 stepparent	0.26
Male to Female	0.21
13-14 yr. old to 15-18 yr. old	0.19
Officer to E7-E9	0.13
Family Cohesion Subscale	**d value**
10-12 yr. old to 15-18 yr. old	0.58
2 parent to 1 stepparent	0.44
10-12 yr. old to 13-14 yr. old	0.36
Single parent to 1 stepparent	0.26
13-14 yr. old to 15-18 yr. old	0.21
Male to Female	0.20
Officer to E7-E9	0.14
Family Adaptability Subscale	**d value**
10-12 yr. old to 15-18 yr. old	0.50
2 parent to 1 stepparent	0.34
10-12 yr. old to 13-14 yr. old	0.34
Single parent to 1 stepparent	0.23
Male to Female	0.20
13-14 yr. old to 15-18 yr. old	0.16
Officer to E7-E9	0.10

The difference between the youngest and oldest adolescents in terms of family satisfaction is quite large relative to other group differences observed with the measures in this study. This is not surprising given the individuation and beginnings of separation from family that occur during adolescence (Olson et

al., 1983). The family structure and gender differences as well as the differences between the two younger age groups are of a sufficient magnitude that they are likely to have practical importance.

Physical Punishment by Parents: Results

See Tables A7-2 to A7-5 in Appendix A for frequency data.

Physical punishment was assessed with the following items:
1. Within the past year, have you been physically punished (spanked, hit, etc.) by your parent(s) for something they felt you did wrong?
2. If yes, about how many times did this happen in the past year?

Use of physical punishment by parents during the past year was reported by 27.5% of the adolescents. Of those, 29.5% reported it occurred only once, 46.3% reported a couple of times, 16.0% reported several times, 4.1% reported it occurred fairly often, and 4.1% reported it occurred very often. Significant differences regarding the use of physical punishment were found among pay, age, and race groups.

- Adolescents with parents who were in either the E1-E6 (30.7%) or E7-E9 (27.6%) pay groups were more likely than Officers' adolescents (22.8%) to report that their parents used physical punishment.
- Younger youths, 10-12 (31.6%) and 13-14 year-olds (27.8%), were more likely to report having been physically punished than the 15-18 year-olds (22.3%).
- More Black youths (34.6%) reported physical punishment than White youths (23.8%).

The family satisfaction of respondents was related to whether or not their parent used physical punishment; $F(1, 5936)=356.07$, $p<.001$. Adolescents whose parents used physical punishment reported lower levels of family satisfaction (3.05) than adolescents whose parents did not use physical punishment (3.56). Of those who said that they were punished, family satisfaction was lowest for adolescents whose parents used physical punishment very often (2.78), several times (2.77), and fairly often (2.72) compared with those that used physical punishment only once (3.24), or a couple of times (3.07). Table 4H-2 presents the magnitude of the differences (d-values) in overall family satisfaction scores between those who have and have not been physically punished as well as between groups who reported different frequencies of physical punishment.

Table 4H-2
Magnitude of Difference in Family Satisfaction Score
by Presence or Absence and Frequency of Physical Punishment

Overall Family Satisfaction	d value	Overall Family Satisfaction	d value
Physically punished Yes vs. No	0.54	Once vs. Fairly often	0.50
Punished once vs. Several times	0.50	Once vs. Very often	0.37

The magnitude of these differences suggests that use and frequency of physical punishment is a fairly reliable predictor of family satisfaction.

Relationship with Family: Discussion

The data on family satisfaction reveals that average scores for military adolescents on the overall scale and subscales are similar to the published norms (Olson & Wilson, 1982). These results support the belief that military youths are similar to teens in the civilian population. However, lower levels of satisfaction were reported by those youths with one biological and one stepparent. Younger youths had higher levels of satisfaction than older teens, thus providing support for the theory that as adolescents get older, peers become more important and parents less important (Olson et al., 1983). This is however inconsistent with the study of Henry (1994) who found that older adolescents have higher levels of family satisfaction than younger children.

That physical punishment is being used in any families with adolescents is problematic. Therefore, it is recommended that parental education programs be developed that focus on discipline patterns using the information from this study. These programs should educate parents regarding the connections among several factors that have been studied in this report: family satisfaction, strictness, punishment, well-being, and behaviors. Furthermore, these programs should also provide parents with information about the importance of their involvement in their children's schools and activities as well as the importance of friendships for the development of their children.

The family perceptions of these youths are also addressed in the subsection Perception of Military Family Life in the next section of this report.

4I. Military Experiences and Perceptions

Growing up in a military environment has both positive and negative aspects. Positive aspects include the opportunity to make friends in many different locations; fluency in another language; immersion in a new culture; and access to services, programs, and facilities to meet needs under various circumstances

(Wuebker-Battershell, 1994). According to discussion group participants, challenges of growing up in a military environment include being uprooted just as the family is getting adjusted to their current "home," losing credits due to school changes, having to take on adult roles when a military parent is gone, and having limited communication with a parent on assignment.

Wertsch (1991) noted strengths that may be gained from this lifestyle include a strong sense of responsibility, excellent social skills, resilience, loyalty, willingness to take risks, discipline, tolerance, idealism, and the ability to handle crises. Alternatively, these same characteristics, when not in balance, can produce problems. These problems may include a tendency to be over-responsible, to protect oneself from developing close friendships, to have difficulty taking a stand for one's own beliefs, and to have a tendency to move on rather than to stick with a situation and work through the problems (Wertsch).

Military Experiences: Results

See Tables A8-1 to A8-29 in Appendix A for frequency data.

This final segment of the report discusses questions that assessed experiences unique to military adolescents and their perceptions of military life. A number of items in the survey addressed these questions:
1. Housing (military housing on base, military housing off base, not in military housing)
2. Separation from parents due to deployment
3. Moved due to parent(s) deployment
   a. Which parent (father, mother, both)
   b. How long away from home (< 1 month, about a month, several months, about a year, > 1 year)
4. Experience with living overseas (has lived overseas and last move from overseas)
5. Number of moves.

Housing Status: Results

See Tables A8-1 to A8-4 in Appendix A for frequency data.

About half (51.1%) of respondents lived in military housing. The proportion of respondents who reported living in military housing differed by service, location, pay, age, and race groups.
- More Army families (67.2%), Marine Corps families (66.1%), and Navy families (61.2%) lived in military housing on and off base than Air Force families (46.5%).

- More families stationed overseas lived in military housing (80.1%) than those stationed stateside (45.2%).
- More families in the pay group E1-E6 lived in military housing (61.1%) than E7-E9 pay group (46.4%) and Officer families (45.8%).
- More youths in the youngest age group (10-12) lived in military housing (55.7%) than those aged 13-14 (49.9%) and 15-18 (45.4%).
- More Black youths (61.0%) than White youths (45.1%) lived in military housing.

Separation from Parents Due to Deployment: Results
See Tables A8-5 to A8-8 in Appendix A for frequency data.

More fathers (62.1%) than mothers (11.0%) were deployed during the past year. These percentages differed by location and race for mothers and by service and location for fathers.
- Army fathers were most likely to have been deployed in the past year (70.6%), followed by Air Force (66.0%), Marine Corps (64.7%), and Navy (59.1%).
- OCONUS fathers (70.6%) were more likely to have been deployed than CONUS fathers (62.1%).
- OCONUS mothers (15.2%) were deployed more often than CONUS mothers (10.1%).
- Mothers of Black adolescents were deployed more often (18.3%) than mothers of White youths (8.7%).

Living Elsewhere Due to Parent Deployment: Results
See Tables A8-9 to A8-12 in Appendix A for frequency data.

During the preceding five years, only 11.0% reported having to move to another home or staying with someone other than their parents due to parental deployment. This percentage did not differ significantly by military environment factors or personal characteristics.

Which Parent Deployed

The 686 respondents who stated that they had moved or stayed elsewhere due to their parents' deployment are addressed in this section.
- When respondents reported living elsewhere due to deployment of a parent, 79.8% were fathers, 11.0% mothers, and 9.2% both parents. These percentages differed significantly by service and race.

Table 4I-1
Which Parent was Deployed
Residential Displacement by Service

	Army	Air Force	Navy	Marine Corps
Father deployed	70.9	79.7	81.3	88.8
Mother deployed	15.6	10.4	11.9	7.1
Both parents deployed	13.5	9.9	6.7	4.1

Table 4I-2
Which Parent Was Deployed
Residential Displacement by Race

	White	Black
Father deployed	85.0	64.6
Mother deployed	8.2	20.8
Both parents deployed	6.8	14.6

How Long Away From Home

The 686 respondents who stated that they had moved or stayed elsewhere due to their parents' deployment are addressed in this section.

Those adolescents who stayed elsewhere most often reported that their length of time away from home was greater than one year (32.8%) followed by several months (21.7%), about a year (19%), less than one month (15.8%), and about a month (10.6%). These percentages differed significantly by location.
- More parents living stateside were away for several months to more than a year (75.7%) than those living overseas (63.3%).

Experiences with Living Overseas: Results

See Tables A8-13 to A8-16 in Appendix A for frequency data.

A large percentage of adolescents (63.5%) reported having lived overseas and many (47.9%) reported their last move was from overseas. Significant differences in these percentages were found by service, location, and pay groups, but not gender and race groups. Age group was significant only for having lived overseas.
- More youths with parents in the Army reported having lived overseas (75.9%) than Air Force (69.9%), Navy (67.5%), and Marine Corps (51.6%) youths; however more Air Force youths reported their last move was from overseas (48.2%) than Army (42.8%), Marine Corps (41.4%), and Navy (39.9%) youths.

- More youths with parents in the E7-E9 (66.4%) and Officer (65.2%) groups reported having lived overseas than those with parents in the E1-E6 pay group (59.4%). More youths with a parent in the E1-E6 pay group (53.1%) reported their last move to be from overseas, than those with a parent in the E7-E9 pay group (49.5%) and Officers (37.2%).
- The percentage of youths who reported living overseas increased as age increased (59.4% of 10-12 year-olds; 63.7% of 13-14; & 68.3% of 15-18).

Number of Moves: Results

See Table A8-17 in Appendix A for frequency data.

The average number of moves reported by the respondents is 4.0 (SD = 2.57). Significant differences in the mean number of moves reported were found for service, location, pay, age, and race groups.
- Average number of moves for youths whose parent was in the either the Army (4.58) or Marine Corps (4.28) were significantly higher than Air Force (3.93) or Navy (3.70).
- Youths who lived overseas had an average number of moves (4.31), which was significantly higher than those living stateside (3.94).
- The average number of moves increased significantly with increase in rank: E1-E6 (3.35), E7-E9 (3.88), Officers (5.12).
- The average number of moves increased significantly as age rose: 10-12 year-olds (3.45), 13-14 year-olds (4.16), 15-18 year-olds (4.48).
- The average number of moves for White adolescents was 4.17 as compared to Black adolescents' average of 3.73.

Military Perceptions: Results

Perceptions of the military were measured with six items:
1. Perception of structure (very strict, somewhat strict, neither, somewhat relaxed, very relaxed)
2. Perception of safety of area of residence (very unsafe, unsafe, safe, very safe)
3. Concerns about moving to new area (more violence and higher crime)
4. Happiness with residence
5. Perceptions of military family life
6. Perceptions of opportunities the military offers its members.

Perceptions of Structure: Results

See Tables A8-18 to A8-21 in Appendix A for frequency data.

Overall 36.8% the respondents reported that military family life was strict, 23.0% felt that it was relaxed, and 40.1% felt that it was neither strict nor relaxed. These figures were significantly different by service, gender, and age groups.

- A higher percentage of youths with parents in the Marine Corps reported military life as strict (43.4%) than those with parents in either the Navy (37.8%) or Air Force (34.8%). Army youths (37.9%) did not differ significantly from any of the other services.
- More females (38.3%) than males (35.3%) reported military life as strict.
- As age increased, respondents were more likely to perceive military life as strict. In the 10-12 age group, 32.3% felt military life was strict compared with 35.7% for the 13-14 and 43.8% of the 15-18 year-olds.

Perception of Safety of Area of Residence: Results

See Tables A8-22 to A8-25 in Appendix A for frequency data.

The majority of the adolescents (86.8%) reported feeling safe in their place of residence. This figure differed significantly by service, location, and pay groups.

- Significantly more youths with parents in the Air Force (91.3%) reported feeling safe than those in the Marine Corps (86.9%), Navy (86.7%), or Army (83.3%) families.
- Fewer youths living stateside (86.5%) than those living overseas (88.2%) reported feeling safe.
- More Officers' children than enlisted children reported feeling safe: Officers (92.1%), E7-E9 (85.6%), and E1-E6 (84.5%).

Concerns About Moving to New Area: Results

See Tables A8-26 to A8-29 in Appendix A for frequency data

About 1 in 5 adolescents reported strong concerns about moving to a new area; 17.6% related being worried about more violence "quite a bit" or "very much" and 17.8% expressed similar concerns about higher crime. When examining the concerns about more violence, the figures differ significantly by location, gender, and age groups, but not service, pay, or race groups. The percentage of youths who reported worrying about moving to an area where there is higher crime differed by service, location, gender, and age groups, but not by pay and race groups.

- Navy youths (24.6%) were more likely than Air Force (17.7%) youths to have reported a high degree of concern about moving to an area where

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there is higher crime. Army (19.1%) and Marine Corps youths (18.8%) did not differ significantly from one another or from the other two services.

- Adolescents living overseas reported greater concerns about both moving to an area with more violence (27.1%) and higher crime (27.6%) than those living stateside (15.7% related serious concerns for both crime and violence).
- Females were more likely (19.4%) than males (15.4%) to have strong concerns about moving to an area with more violence. Females also were more likely (19.1%) to have strong concerns about more crime than males (16.3%).
- The youngest group (10-12 year-olds) were more likely (21.6%) to have serious concerns about moving to an area with more violence than the 15-18 year-olds (14.0%). The 13-14 year-olds (16.7%) did not differ significantly from either of those groups. The youngest group was also most likely (22.4%) to be concerned about moving to an area with higher crime than either the 13-14 year-olds (16.1%) or the 15-18 year-olds (14.2%).

Happiness with Residence: Results

See Tables A8-30 to A8-31 in Appendix A for frequency data.

About half of the respondents (51.1%) reported being happy with where they live. This percentage differed significantly by service, location, pay, age, and race groups.

- Air Force youths (53.6%) were more likely to report feeling happy about their area of residence than Navy (46.6%), Army (44.6%), or Marine Corps (44.2%) adolescents, which did not differ significantly from one another.
- Youths who lived stateside (53.9%) more often reported being happy with where they lived than those living overseas (37.7%).
- Officers' (54.6%) and E7-E9 (53.3%) adolescents were both more likely than E1-E6 youths (46.5%) to report feeling happy with their area of residence.
- The 10-12 year-olds (54.7%) were more likely to report happiness with their place of residence than either the 15-18 year-olds (51.1%) or the 13-14 year-olds (47.6%), who were not significantly different from one another.
- White adolescents (55.7%) were more likely than their Black counterparts (47.0%) to relate feeling happy with their place of residence.

Tables 4I-3 and 4I-4 present comparisons between the military adolescents in the current study and the responses provided by NLS adolescent respondents

(Udry et al., 1997) regarding perceptions of safety of their neighborhood and happiness with their neighborhood.

Table 4I-3
Ratings of Neighborhood Safety

Group	Very Safe/Safe	Very Unsafe/Unsafe
Military adolescents (MFI)	86.9%	13.1%
NLS adolescents	88.2%	11.8%

Note. The response categories differed across the two surveys, the NLS survey asked respondents "Do you usually feel safe in your neighborhood?" with yes and no response categories. The MFI item was "Do you think the place where you live is ......" with very unsafe, unsafe, safe, and very unsafe as the response categories.

Table 4I-4
Ratings of Happiness with Neighborhood

Group	Very Happy	Happy	Mixed Feelings	Unhappy	Very Unhappy
Military adolescents	21.4%	29.7%	38.4%	6.1%	4.4%
NLS adolescents	32.6%	36.3%	21.8%	6.2%	3.1%

Note. The response categories differed across the two surveys, the NLS survey asked respondents "On the whole, how happy are you with living in your neighborhood?" responses were on a five-point scale ranging from not at all to very much. The MFI item asked respondents "How happy are you with where you live?" response options were on a five point scale ranging from very happy to very unhappy.

While fewer respondents in this MFI study than the NLS study related being generally happy with their place of residence, there was also a larger percentage who felt ambivalent about their neighborhood. As shown in Table 4I-4, in terms of outright unhappiness, there was little difference between these military adolescents and the NLS respondents.

Perception of Military Family Life: Results
See Table A8-34 in Appendix A for group means.

The overall satisfaction with military family life was high, averaging 3.29 (*SD* = 0.94). These scores could range from 1-5, with higher scores indicating more positive perceptions of military family life. Significant differences in satisfaction with military family life were found for service, location, pay, and age groups, but not for gender or race groups.
- Youths with parents in the Air Force scored significantly higher (3.39) than those with parents in the Army (3.23) or Navy (3.20). Marine Corps youths (3.32) did not differ significantly from any of the other three services.
- Stateside youths scored significantly higher (3.31) than those living overseas (3.23).

- Officers' children scored significantly higher (3.38) than E1-E6 youths (3.24).
- The younger group (aged 10-12) scored significantly higher (3.43) than the 13-14 year-olds (3.21) and the 15-18 year-olds (3.22).

Table 4I-5 presents the group differences in perception of military family life. Of the group differences presented in this table, only those between age groups and Air Force and Navy are of a sufficient magnitude that they are likely to have much practical significance.

Table 4I-5
Magnitude of Group Differences in Perception of Military Family Life

Group Comparison	d value	Group Comparison	d value
10-12 vs. 13-14 year-olds	0.24	Air Force vs. Army	0.17
10-12 vs. 15-18 year-olds	0.22	Officers vs. E1-E6	0.14
Air Force vs. Navy	0.20	CONUS vs. OCONUS	0.08

Perception of Military Opportunities: Results

See Table A8-34 in Appendix A for group means.

The overall perception that the military offers opportunities to its members was high, averaging 3.45 (SD = 0.76). The scores ranged from one to five, with higher scores indicating a more positive perception of opportunities that the military gives to its members. Significant differences were found for service, location, pay, age, and race groups.
- Air Force youths (3.53) scored significantly higher than Army (3.40) and Navy (3.35). Marine Corps youths (3.45) did not differ significantly from the other services.
- Adolescents who live stateside scored significantly higher (3.46) than those living overseas (3.38).
- Perception of military opportunities increased significantly with increases in parental rank. Youths with an E1-E6 parent (3.30) had the lowest scores followed by E7-E9 youths (3.46) and Officers' children (3.61).
- The oldest group of adolescents scored significantly higher (3.50) than the 13-14 year-olds (3.40). The 10-12 year-olds (3.43) were not significantly different from the other two groups.
- White youths (3.50) scored significantly higher than Black youths (3.42).

Table 4I-6 presents the **d** values associated with the statistically significant group comparisons for perception of military opportunities. The difference between the Officers and E1-E6 group is likely to reflect a fairly noticeable difference in attitude toward the military across these groups. The differences

between Air Force and Navy adolescents and the other pay group comparisons are smaller, but may still be of practical significance.

Table 4I-6
Magnitude of Group Differences in Perception of Opportunities
Available to Military Members

Group Comparison	d value	Group Comparison	d value
Officers vs. E1-E6	0.40	Air Force vs. Army	0.18
Air Force vs. Navy	0.23	15-18 year-olds vs. 13-14 year-olds	0.13
E7-E9 vs. E1-E6	0.20	CONUS vs. OCONUS	0.11
Officers vs. E7-E9	0.20	White vs. Black	0.11

Military Experiences and Perceptions: Discussion

About half of the respondents lived in military housing. Twiss and Martin (1997) reported that 30% of military members with dependents lived in military housing. Thus, the present sample appears to overrepresent those living in military housing. On the whole this group of adolescents moved often, had lived overseas at some point, and experienced separations from their parent(s)—most often from their father. These separations, on average, were longer for those adolescents living stateside. Few of the respondents had experienced residential displacement due to parental deployment, however, when they did, this displacement tended to be for long periods of time.

While living overseas provides the potential for exposure to new cultures and languages, this is not always viewed by youths as positive. With very few exceptions these adolescents related sincerely enjoying life overseas, especially if they lived on base or post. A discussion group participant said:

> *I really liked Okinawa, the whole community, I loved it. I loved, there was so much for people to do, the beaches, they had teen clubs at night and stuff and they had all this stuff, it was so fun.*
>
> *--Military Adolescent*

Those who lived off installation often related having difficulties. A quote from a discussion group participant illustrates these difficulties.

> *Well, I have moved to Germany and it is very hard to live over there because I did not live on base. I lived around the Germans and you cannot understand a word they say. Not anything they say.*
>
> *--Military Adolescent*

Participants in all age groups expressed strong emotions about parents leaving for dangerous assignments. Comments ranged from "I miss my mom" to "I'm afraid he'll die." Older boys worried about having someone with whom to discuss problems. Those in the older and middle age groups—often taking on adult roles—talked frequently about their increased responsibilities while their fathers were away. A discussion group participant said:

> *Being the oldest in the family sort of puts you, I have a sister and I am the oldest out of us so it kind of puts me in the, she's not doing well in school and my mom doesn't get home until 6:00 at night and it sort of puts me in charge of her and it is really hard because she doesn't like listening to anybody and she doesn't like to do what I tell her.... it's kind of hard cause I have to make sure my mom is happy and my sister is happy at the same time.*
>
> *--Military Adolescent*

Discussion group participants generally related a clear differentiation between perceptions of safety for those adolescents living on base or post versus those living off installation. In general, those youths living on base felt very safe while those living off base or post were quite likely to talk about how they did not feel safe:

> *...I do like that if you are on base, you know that you're safe and secure, and I just like the things that they do there, mostly, the programs that they have, I know that they have good programs. And I just like that safe, secure feeling on, if I do ever come on base.*
> *Once night-time hits...all you hear from my neighborhood and the neighborhood across is gunshot hour. You're gonna hear that all night.*
>
> *--Military Adolescent*

A sizable proportion of respondents felt that military family life was strict—Marine Corps youths, females, and older youths were most likely to have this perception. The general impression conveyed by discussion group participants was one of distress that military parents dealt with family members as they dealt with their military subordinates. Participants said:

> *And they're kinda down your throat most of the time, cause my dad was a drill instructor and you know his favorite thing to do was yell when he gets mad.*
>
> *It's like every time she gets up one more level, she gets stricter, and so she wanted to get "chief" and I'm like don't want her to go to "chief" because she's going to be so harder then.*
>
> *--Military Adolescents*

These adolescents related feeling quite safe where they lived. This perception of safety was buttressed by the discussion group participants. This feeling of safety was not always appreciated. While they did appreciate being able to

walk safely at night, the safety sometimes was perceived as oppressive. Adolescents sometimes equated a safe environment with having nothing to do. Respondents were often aware that potentially dangerous areas existed right outside the installation's gate. The respondents also had a positive perception of military family life and the opportunities that the military affords its members. While Nice and Beck (1978) identified a number of potentially stressful dimensions of military family life, this group of respondents presented a picture of military family life that was quite positive overall.

5. Summary

The majority of the respondents to this survey reported being healthy, engaging in weekly exercise, participating in appropriate school and community activities, doing homework, and getting good grades in school. Furthermore, they related being happy with their school, home, and community environments. Comparisons with other studies, where available, revealed that military adolescents are, in general, doing at least as well, and in some cases slightly better than their civilian peers on most of the indicators measured.

A small number of these adolescents appeared to be at risk for mental health problems. These numbers appear to be comparable to those in the civilian population. A large percentage of the adolescents surveyed related they did not use alcohol, illicit drugs, or cigarettes. When they did use these substances, their drugs of choice during the past 30 days were alcohol, marijuana, and inhalants. Comparisons with civilian data revealed that these military adolescents used alcohol, marijuana, and inhalants substantially less frequently than their civilian counterparts. Furthermore, few respondents related that they engaged in antisocial behaviors.

A concern arising from this data is the adolescents' reports of discipline problems of other students. Many stated that their learning in school was disrupted due to behavior problems and that few consequences were given for this behavior. There were also a number of youths who related poor discipline patterns by their parent(s) (e.g., the use of physical punishment). Additionally, while the majority declared that they did not engage in delinquent behaviors, a small percentage of youths were engaging in antisocial behaviors of a serious nature. Identification of these youths would allow needed services to be provided for them.

A further issue of importance was the socialization patterns of military adolescents. While most adolescents reported having friends, a small number appeared to be having difficulties making new friends. Peer relationships can be problematic since these youths move and change schools often, thus enduring frequent exposure to disruption of their social networks.

The majority of the respondents reported that they felt safe at school and in their place of residence. However, the fact that some respondents felt unsafe is of particular concern since these feelings can be related to school and mental health problems (Jeffreys & Leitzel, 1997).

6. Summary of Group Differences

Many statistically significant differences were found by service, location, pay group, gender, age, and race group. These differences were found on health, antisocial behaviors, alcohol and drug use, recreational and leisure activities and environmental factors. Air Force youths reported fewer risk factors and Navy youths appeared to be most at risk. Adolescents living overseas were found to be more at risk than those living stateside. OCONUS youths seemed to have greater potential for obtaining support since they lived more often on base or post and participated in youth programs. The children of Officers presented themselves as less at risk than the other two pay groups, while children of parents in the E7-E9 pay group appeared to be at greatest risk.

6A. Service Differences

Air Force youths were least likely to have ever smoked cigarettes, used drugs or alcohol, or to report engaging in antisocial behaviors during the past year. Navy youths, on average scored lower than the other three services on the Index of Psychological Well-Being. Air Force youths generally viewed their interactions with their teachers more positively than youths with a parent in the other three services. More Army families than other service families reported living in military housing on and off base/post, living overseas, and moving often. Army fathers were more often separated from their children than were those from other groups. Air Force youths had the most positive perception of opportunities the military offers it members.

6B. Location Differences

Youths living overseas reported more moves, more safety in their place of residence, and greater concerns about moving to an installation with more violence and higher crime than those adolescents living stateside. OCONUS youths were also more likely to report that they had engaged in antisocial behaviors. On the other hand, those youths living stateside reported happiness with where they lived and with the military family life more often than those living overseas. CONUS youths perceived their interactions with their teachers more positively than those living overseas. They also reported that the military offers its members opportunities. Youths living overseas reported more frequent separations from both their mothers and their fathers.

6C. Pay Group Differences

Officers' children more often than youths with parents in the other pay groups reported moving often, feeling safe in their neighborhoods, feeling happy with where they lived and military life, and feeling that the military offers its members opportunities.

6D. Gender Differences

Fewer females than males reported their health as excellent and females were also less likely than males to participate in weekly exercise and physical activities. On the other hand, females were more involved in academic endeavors than males were and reported fewer problems with school and fewer behavior problems. More males than females reported engaging in sports and antisocial behaviors. Of concern is the involvement with alcohol, illegal drugs, and cigarettes for both males and females. While there were no differences by gender in alcohol use, males were more likely to have used marijuana or inhalants at some point during their lives. Furthermore, females were having an easier time socializing with friends than males, but males reported greater family satisfaction than females. More females than males reported that they felt that military family life was strict and that they worry about moving to an installation with more violence and higher crime.

6E. Age Group Differences

More of the younger than older youths reported good to excellent health, engaging in activities (including activities at the youth centers on base or post), doing better at school, interacting with teachers, identifying with friends, and having better perceptions of their family and military life. The youngest age group reported substantially higher levels of both psychological well-being and family satisfaction than either of the older age groups. More of the older two groups of participants reported engaging in sports programs and antisocial behaviors. Like the civilian population, as military youths aged they perceived themselves as having less support and thus, were more at risk. Furthermore, it is problematic that as youths aged they were more likely to report feeling alone and lonely. Older youths more often than younger youths view the military family life as strict, reported being unhappy with their place of residence, and reported that they were less happy with military family life. However, this older group was more likely than other groups to report that the military provided its members with opportunities.

6F. Race Group Differences

Black youths reported that they engaged in antisocial behaviors, had frequent problems in school, and felt alone and lonely more often than White teens. On the other hand, a higher percentage of White than Black youths reported smoking cigarettes. Black youths more often lived on base or post in military housing and they were more likely to report using the youth centers on base or post. White youths were more likely than Black youths to report belonging to organizations, having a positive attitude toward school, identifying with their friends, experiencing satisfaction with family life, feeling satisfied with their place of residence, and perceiving the opportunities the military provides its members positively. Black adolescents were also more likely to report having experienced a separation from their mother due to her military assignment.

7. Implications

7A. Health

The rates of health problems in this military sample are close enough to those presented in the literature to indicate that there are not substantial differences in the health status of military adolescents as compared to civilian youths. Thus recommendations from the literature with respect to improving adolescent health should be applied.

- Education and counseling programs for youths and their parents should promote a healthy lifestyle. These programs should include instruction on environmental factors affecting health as well as nutrition and exercise information.
- Anti-smoking education programs (shown to delay the onset of use) should be implemented.

7B. Mental Health

Social belongingness and family satisfaction accounted for a substantial proportion of the variance in well-being scores (Leitzel, et al., 1997). This indicates that given the frequent moves that are encountered by military youths, well-being may be buttressed by assisting youths in quickly developing a sense of belonging with their peers.

- Programs should be developed to identify and ensure appropriate treatment for those youths who are most clearly at risk.
- Family-friendly relocation processes could have a positive impact in terms of both increased family satisfaction and greater levels of social belongingness.
- Mentoring programs should be developed with input and assistance from adolescents.

7C. Antisocial Behavior and Alcohol and Drug Use

The majority of respondents did not engage in antisocial behaviors or use alcohol and drugs. Since any involvement in these behaviors is so problematic, the military should immediately implement and expand programs to address this misconduct. It is essential that these programs be implemented overseas as a higher percentage of youths living OCONUS reported alcohol use and engaging in antisocial behaviors.
- Expansion of prevention programs.
- Identification of adolescents at risk.
- Implement or expand intervention programs that have been successful in the military (e.g., Caulkins, Fitzgerald, Model, & Willis, 1994) and civilian populations.

7D. Activities

Involvement in appropriate activities is associated with higher self-esteem and greater well-being (Jeffreys & Leitzel, 1997). Activities have been identified as a protective factor against negative outcomes during adolescence (Losel & Bliesener, 1994). While 90% of the respondents reported participation in either school or community activities, only 42% used military youth centers. Females and older youths participated in fewer activities than other adolescents. Efforts should be made to involve more youths, especially the most vulnerable populations, in activities on base, off base, and at school. These efforts should include but not be limited to the following.
- Increase awareness of activities that are available to military youths on and off base/post.
- Involve adolescents in the planning of activities to increase investment and thus, utilization.
- Activities on base or post should be coordinated and, where possible, integrated with school and community activities.
- Increased efforts should be made to involve females and older adolescents in athletics and other programs.

7E. School

Respondents' GPAs were generally high, school culture was generally viewed as positive, and parents were reported to be involved in respondents' school work. However, the misbehaviors of other students were reported as disruptive and as an interference with learning. Involvement in school activities was associated with greater well-being and a positive school culture was associated with less antisocial behaviors (Jeffreys & Leitzel, 1997). Therefore, the military should encourage parents to become more involved with the school process in ways that will encourage adolescent involvement in school activities and foster a positive school culture.

- Military parents should collaborate as much as possible with school personnel in the development of policies and procedures addressing rules and discipline. One possible example could be parents assisting with the development of programs focused on handling misconduct in the classroom.
- Adolescents should be made aware that misbehavior in educational settings will have consequences and what those consequences will be.
- Military personnel should be encouraged to participate in school activities, especially those programs (academic and non-academic) that foster student involvement.
- Military personnel should be made aware of servicewide policies, such as the Army's (Willis, 1997) allowing time off from duty for volunteering. Encouraging personnel to become more involved in schools and youth activities would accrue important benefits to all concerned.

7F. Peers

The majority of respondents reported satisfying relationships with peers. A small percentage did report not belonging to a group of peers and thus, felt alone and lonely. Peer relationships were not associated with family, school, well-being, involvement in activities, or antisocial behaviors (Jeffreys & Leitzel, 1997).

- Military personnel might explore ways to help promote the development of friendships among youths.
- Peer mentors could be identified for adolescents when they move to a new base or post.
- In-depth investigations of the socialization processes of military adolescents should be included in future research.

7G. Family

Most respondents reported generally high levels of family satisfaction and happiness with military family life. While a larger number of respondents perceived military family life as strict rather than relaxed, the largest percentage of youths felt that military family life was neither strict nor relaxed. Some respondents reported dissatisfaction with their family and military family life. According to the literature and the current data, family satisfaction is often linked to higher levels of satisfaction with peers, school, and the community and lower levels of delinquent behavior, and alcohol and drug use (Eccles et al., 1993; Jeffreys & Leitzel, 1997). Those youths who reported being physically punished by their parents also reported lower family satisfaction. Therefore, the military should consider implementing and expanding parenting classes and other programs to assist families with children.

- Parenting programs focusing on discipline patterns using the information from this study should be initiated. Such programs could focus on the connections among family satisfaction, strictness, punishment, well-being, and antisocial behaviors. These programs could also provide instruction in behavior modification techniques that could be utilized as an alternative to physical punishment.
- Parental involvement in school, sports, community, and youth activities exhibit a high payoff.
- Families should be educated regarding the importance of friendships for their adolescents.
- In-depth investigations of parenting patterns should be researched further.

7H. Safety

The majority of respondents reported feeling safe in their place of residence and in their schools, but those who reported feeling unsafe were also likely to have reported more indicators of gang activity and greater exposure to violence against both themselves and others (Jeffreys & Leitzel, 1997).

- Public relations work needs to be done with incoming families regarding safety, violence, and crime on installations.
- If safety is an actual issue at a given site, efforts should be made to educate families regarding safety and security features and programs already in place. Coordination with schools and communities in the vicinity of installations is essential if these efforts are to be successful.
- In-depth investigations of safety and gang-related activities are needed.

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13. ABSTRACT *(Maximum 200 words)*:   The purpose of this technical report is to present the health, mental health and activities and behaviors of adolescents living in military families. Environmental experiences and perceptions of these youths are presented along with perceptions with respect to school, peers, family, and the military. Comparisons with civilian adolescents are presented. Data were collected from 6,382 adolescents at military installations of the Air Force, Army, Marine Corps, and Navy around the world. Participants were selected via a two-stage stratified probability sampling design. Installations were selected during the first stage with probability proportional to size. Adolescents were randomly selected during the second stage. Surveys were administered on-site by trained MFI staff. The preponderance of respondents to this survey reported being healthy; engaging in weekly exercise; participating in appropriate school and community activities; doing homework and getting good grades in school. These military youths were very similar to their civilian counterparts. Few respondents were found to be at risk for mental health and behavior problems. Youth with a parent in the Navy, those living overseas, and those with a parent in the E7-E9 pay group appeared to be at relatively greater risk than other groups. Personal characteristics were also explored. Implications are presented.

14. SUBJECT TERMS   military adolescents, mental health, substance use, mobility, family, family satisfaction, friendships, school, health, relationships, safety, activities, recreation, delinquency, separation, parental deployment, punishment, smoking, across-services, duty station location (CONUS vs. OCONUS), pay groups (or SES, socioeconomic status), gender, age, race

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